NightWatcher Security

4 Channel/8 Channel D1 DVR

User Manual

Welcome

Thank you for purchasing the NightWatcher D1 CCTV System.

This manual is designed to be a reference tool for the installation and operation of your system.

Here you can find information about the DVR features and functions, as well as a detailed menu tree.

Before installation and operation please read the following safeguards and warnings carefully.

Important Safeguards and Warnings

- **Do not place any heavy objects on top of the DVR.**
- **Do not let any solids or liquids spill into or infiltrate the DVR.**
- **Gently brush clean the DVR surfaces regularly. Before cleaning please switch off and disconnect the power supply.**
- **Do not disassemble or attempt to repair the DVR by yourself. If repair is necessary please contact the reseller or a qualified specialist.**

Environment

- **Please install the DVR in an appropriate temperature environment; min 0˚C, max 40˚C.**
- **Avoid direct sunlight and install away from any direct heat source.**
- **Do not install the DVR in a damp environment.**
- **Do not install the DVR in a smoky or dusty environment.**
- **Avoid collision or fall.**
- **Please ensure the DVR is installed in a stable work environment.**
- **Please install in a well ventilated and clean location.**
- **Always use within the recommended input and output rating.**

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1. Product Introduction

1.1 Product overview

The NightWatcher D1 DVR is designed specifically for security and surveillance applications. and is an outstanding digital surveillance product. It incorporates an embedded LINUX operating system which is more stable. It incorporates standard H.264mp video compressed format and G.711A audio compressed format which ensures the highest quality image, low error coding ratio and single frame playback. It incorporates TCP/IP network technology which ensures stable network communication and telecommunication ability.

The NightWatcher D1 DVR can be used individually or online, applied as a part of a safety surveillance network. With the professional network video surveillance software provided it offers comprehensive network and telecommunication ability.

The NightWatcher D1 DVR can be installed in a variety of applications in business or at home.

1.2 Main functions

Real-time surveillance

· HDMI and VGA interface

· surveillance function through monitor or display

Storage

· non-working hard disk dormancy processing which is convenient to radiate heat, reduce power and extend life-span

· unique storage format which ensures data protection

Compression

· real-time compression by individual hard disk which ensures the audio and video signal stable synchronization

Backup

· through SATA and USB interface, such as USB hard disk, memory stick and etc.

· through network download of files on the hard disk

Playback

· individual real-time video recording as well as search, playback, network surveillance, recording check, downloading and etc.

· multi-channel playback mode

· zoom-in to arbitrary locations

Network operation

· through network tele-surveillance in real time

· remote control PTZ

· remote check of recording and real-time playback

Alarm linkage

· single channel relay alarm output which is convenient for alarm linkage and light control at the spot

· protect circuits at the alarm input and output interface which protects the main machine from damage

Communication interface

· RS485 interface providing the alarm input and PTZ control

· standard ethernet network interface providing network communication function

Intelligent operating

· mouse action function

· fast copy and paste operating for the same setting

2. Open-Box check and cable connections

2.1 Open-Box check

When you receive your NightWatcher D1 CCTV kit, please check the contents.

Firstly, please check whether there is any visible damage to the package appearance. The packaging materials used for the CCTV kit are designed to protect most accidental knocks during transportation.

Then, please open the box and remove the plastic protective materials. Check whether there is any visible damage to the DVR appearance.

(1).Front panel and rear panel

- The function buttons on the front panel and the interface specification on the real panel are as outlined in the prodsuct specification.
- Please check the product description on the front panel is in accordance with the product type ordered.

The label on the base of the DVR is very important for after sales service. Please protect it carefully. When you contact our customer service, please provide the product type and serial number on the label.

(2). DVR internal (<u>only required if DVR is supplied without Hard Disk</u>)

In addition to checking whether there are obvious signs of damage, please ensure there are no damaged or loose cable connection.

2.2 Frame installation

The specification of the DVR is a standard 1U. It can be installed in a standard frame.

Installation recommendations:

1、Ensure the housing temperature is <35℃.

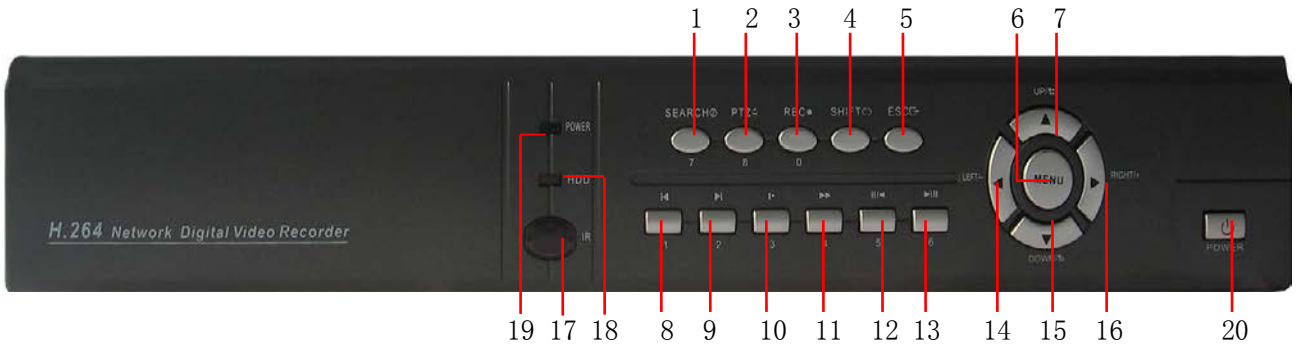
2、Locate the DVR at least 15cm away from other equipment.

3、Frame installation from bottom to top.

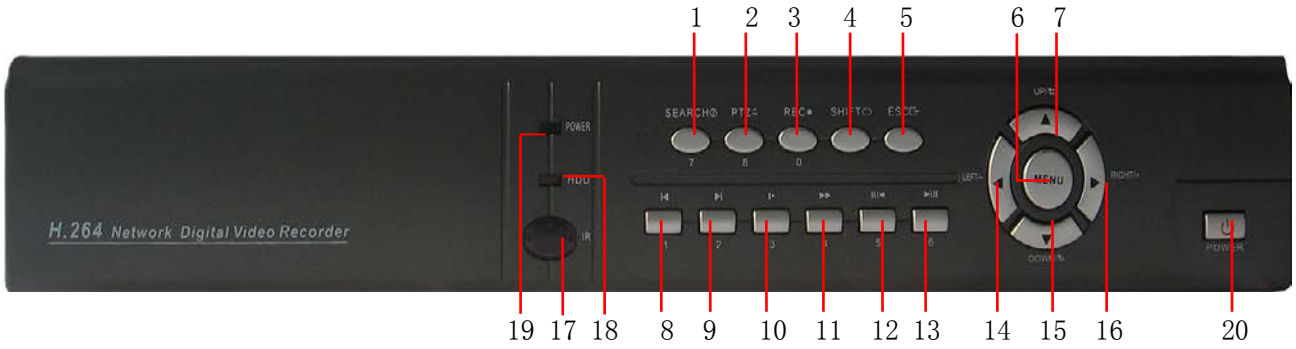
4、If installing multiple components in the frame, take precaution to avoid any capacity overload.

2.3 Front panel

4**CH DVR panel** 1:



8**CH DVR panel** 1:



(1) recording search button / 7 (2) PTZ control button / 8 (3) recording button / 0

(4) shift function button (5) cancel button (6) menu & confirm button

(7) up button (8) play previous file / 1 (9) play next file / 2

(10) slow play / 3 (11)fast play / 4 (12) playback or pause / 5

(13) play or pause / 6 (14) left button (15) down button

(16) right button (17) IR remoter receiver (18) hard disk indicator light

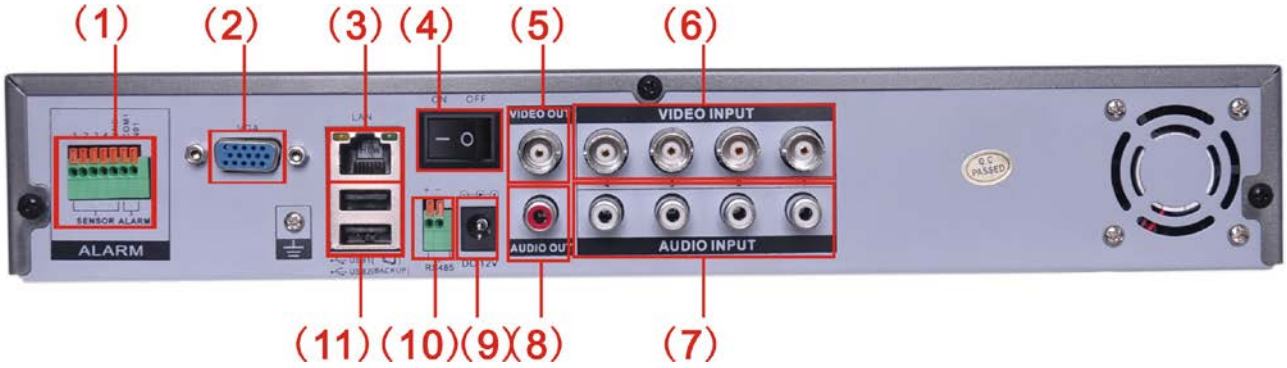
(19) power indicator light (20)power switch (21)hard disk information

Front panel button operation function table

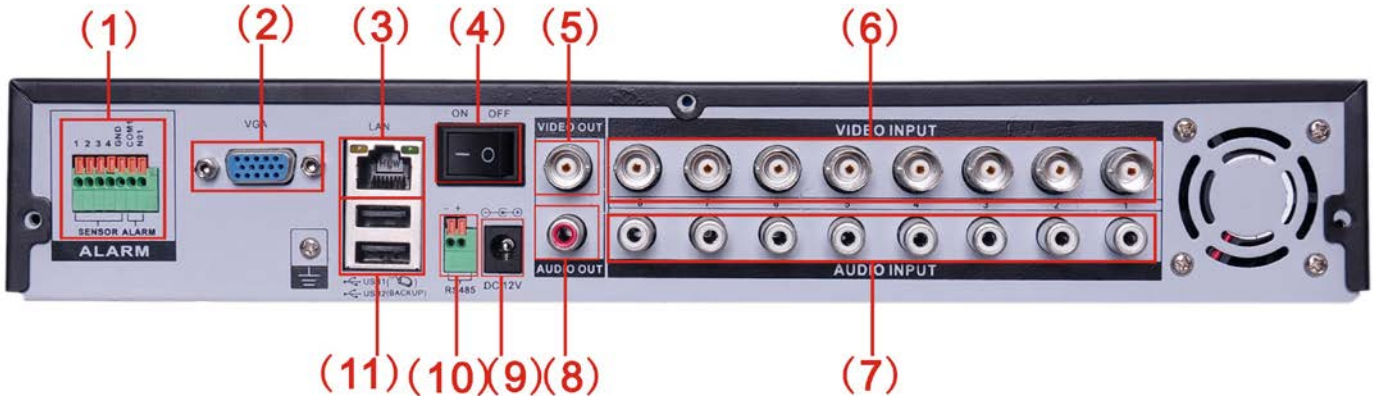
Num.	Button name	Mark	Function
1	Shift function button	**SHIFT**	Shift the number button, character button and other function buttons during input mode
2	Direction button	∨ ∧	Remove the cursor
			Add or decrease number during the user edit mode
			Change menu settings
			Enter 1 channel or 4 channels during surveillance
			After pressing the shift button, press this button to enter 1 or 4 during edit mode
		< >	Remove the cursor when the main menu or submenu is displayed
			Remove the cursor during the playback mode
			Select 2 channel or 3 channel during surveillance image
			After pressing the shift button, press this button to enter 2 or 3 during edit mode
	Main menu/Confirm button	**ENTER**	Confirm
			Enter main menu
3	Cancel button	**ESC**	Back to the previous level menu or cancel operation in the menu
			Back to the real-time surveillance during playback mode
4	Play previous file button	**I◀**	Play previous video during the playback mode Enter 1 during edit mode
5	Play next file button	**▶I**	Play next video during the playback mode Enter 2 during edit mode
6	Slow play	**▶**	Play video in multi-slow or regular speed during playback mode Enter 3 during edit mode
7	Fast play	**▶▶**	Play video in multi-fast or regular speed during playback mode Enter 4 during edit mode
8	Playback/pause button	**II/◀**	Playback the video or pause during playback mode Enter 5 during edit mode
9	Play/pause button	**▶\II**	Play the video or pause during the playback mode Enter 6 during edit mode
10	Recording button	**REC**	Start/stop the video recording manually With the direction button choose the channel in the recording control menu

2.4 Rear panel

4CH DVR panel 1



8CH DVR panel 2



(1) alarm input/alarm output (2) VGA output (3) network interface

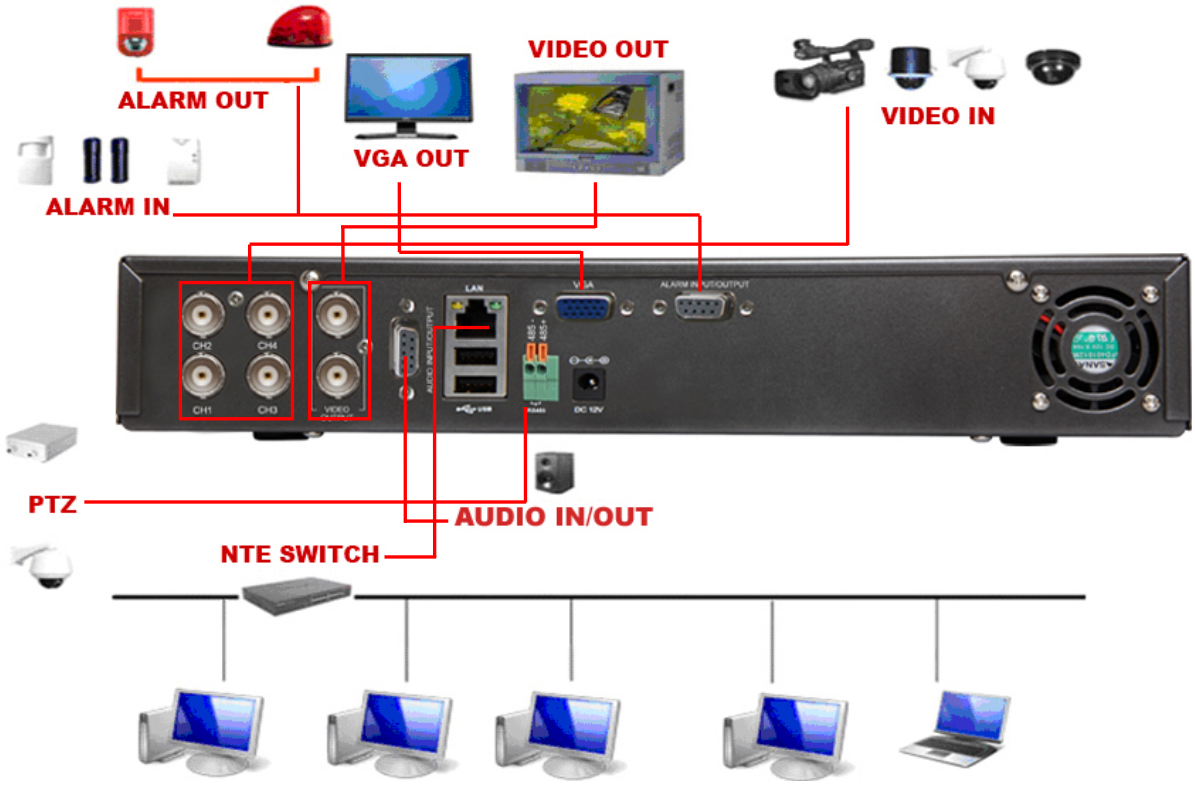
(4) ON/OFF (5) video output (6) video input

(7) audio input (8) audio output (9) CD12V

(10) RS485 (11) USB interface

Note: Some models have a front panel USB interface; the bottom USB interface on the rear panel USB port is mutually exclusive; i.e. only the front or bottom rear panel port can be used at the same time. The top USB port is independent and effective.

2.5 Installation connection sketch map. (This is a 4CH DVR for example. Refer specifically to your product specification.)



2.6 Audio and video input and output connections

2.6.1 Video input connections

The video input port is a BNC connector plug. The input signal is PAL/NTSC BNC($1.0V_{P-P}$,75Ω).

The video signal must be in accordance with the specified standard which has the high signal to noise ratio, low aberration and low interference. The image must be clear and have natural color with appropriate brightness.

Ensure the camera signal is stable and credible

The camera should be installed in an appropriate location, away from backlighting and low illumination or apply better backlighting and low illumination compensation.

The ground and power supply of the camera and the DVR should be shared and stable.

Ensure the transmission line is stable and credible

The video transmission line should adopt high quality coaxial pair which is defined by the transmission distance. If the transmission distance is too far, use a shielded twisted pair, video compensation equipment or transmitted by fiber to ensure signal quality.

The video signal line should be away from any electro magnetic interference and other equipment signal lines. The high voltage current should be especially avoided.

Ensure the connection stable and credible

The signal and shield lines should be firmly connected and eliminate any poor joint welding and oxidation.

2.6.2 Video output connections and options

The video output is divided into PAL/NTSC BNC($1.0V_{P-P}$,75Ω) and VGA output(selective configuration).

When replacing the monitor with computer display, there are some practical considerations;

1、Do not leave in “turned-on” state for extended periods.

2、Keep the computer display working normally by demagnetizing regularly.

3、Avoid any electro magnetic interference.

TV is not an ideal replacement for video output. It is recommended to minimise usage time and control the power supply and any interference introduced by nearby electronic equipment. The discharge of low quality TV can lead to the damage of other equipment.

2.6.3 Audio input

The audio port is an RCA connection.

The input impedance is high so the tone arm must be active.

The audio signal line should be firm and away from any electro magnetic interference and eliminate any poor joint welding and oxidation. A high voltage current should be avoided especially.

2.6.4 Audio output

The output parameter of the DVR audio signal is greater than 200mv 1KΩ (BNC) which can connect to a low impedance earphone and active speaker or other audio output equipment through a power amplifier. If the speaker and the tone arm cannot be isolated, there may be a problem with feedback. There are certain method to deal with the above issue;

1、 Adopt better directional tone arm.

2、 Adjust the speaker volume to be below the threshold that produces feedback.

3、 Use materials which absorb the sound and reduce sound reflection.

4、 Adjust the location of the speaker box and the tone arm.

2.7 Alarm input and output connections (Only available on certain products.)

1、Alarm input

A. Alarm input is grounding alarm input.

B. Alarm input demands the grounding voltage signal.

C. When the alarm is connected with two DVRs or connected with DVR and other equipment, it should be isolated by relay.

2、Alarm output

Alarm output cannot be connected with a high-power load (no more than 1A).When forming the output loop it must prevent the big current from relay damage. Use the contact isolator when there is a high-power load

3、PTZ decoder connections

A. The grounding of the PTZ decoder and DVR must be shared otherwise the common-mode voltage will lead to the PTZ control failure. A shielded twisted pair is recommended.

B. Avoid the input of high voltage, ensure a reasonable layout and take precautions from lightning.

C. In the outlying end connect 120Ω resistance in parallel to reduce inflection and ensure signal quality.

D. The RS485 +、－ lines of DVR cannot be connected with other RS485 output equipment in parallel.

E. The voltage between the +、- lines of the decoder must be less than 5V.

4、Front equipment grounding note

Bad grounding can lead to the burnout of the chip.

5、Alarm input type unlimited

The DVR alarm output port is constant opening type.

2.7.1 Alarm input port specification（This feature should be used in conjunction with an external alarm module. NB: Some models have an optional external alarm module.）

4 channels alarm input. Alarm input type unlimited.

The grounding and the com port of the alarm sensor are parallel (The alarm sensor is external power supply) .

The grounding of the alarm and the DVR should be shared.

The NC port of the alarm sensor must be connected with the DVR alarm input port.

The grounding of the power supply and the alarm sensor must be shared when used in external power supply.

2.7.2 Alarm output port specification（This feature should be used in conjunction with an external alarm module. NB: Some models have an optional external alarm module.）

1 channels alarm output. There is external power supply when using the external alarm equipment.

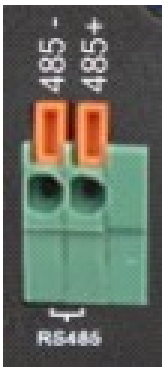
To avoid overload and damage to the system, please refer to the relay before the connection, the relay parameters as defined in the Annex.

2.7.3 Alarm output port relay parameters

Type：JRC-27F		
Interface material	silver	
rating (resistance load)	Rating switch capacity	30VDC 2A, 125VAC 1A
	maximal switch power	125VA 160W
	maximal switch voltage	250VAC, 220VDC
	maximal switch current	1A
isolation	Homo-polarity interface	1000VAC 1minute
	Inhomo-polarity interface	1000VAC 1 minute
	Interface and winding	1000VAC 1 minute
Surge voltage	Homo-polarity interface	1500VAC (10×160us)
Turn-on time	3ms max	
Turn-off time	3ms max	
longevity	mechanical	50×106 MIN（3Hz)
	electric	200×103 MIN (0.5Hz)
Environment temperature	-40~+70℃	

2.8 Speed dome connections

1、Connect the 485 lines of the speed dome with the DVR 485 interface.



2、Connect the video line with the DVR video input.

3、Connect electrical source to the speed dome.

3. Basic operation

3.1 Turn on

Plug in the power adaptor and turn on the power supply. The power supply indicator light indicates the DVR is on. After startup you will hear a beep. The default setting of video output to a monitor is multiple-window output mode. If the startup time is within the video record settings time then the timing video recording function will start up automatically. Then the video indicator light of the corresponding channel is active and the DVR is working normally.

Note:1. Make sure that the input voltage corresponds with the switch of the DVR power supply.

2. Power supply demands: 220V±10% /50Hz-60Hz.

We recommend using a UPS to protect the power supply under certain conditions.

3.2 Turn off

There are two methods to turn off the DVR; **Soft-switching**：Entering [right menu] and choosing [turn off] in the [turn off the system] option; **Hard-switching**：Disconnect mains lead.

Note:

1、Auto resume after power failure

If the DVR is shut down abnormally, it can automatically backup video and resume previous working status after a power failure.

2、Replacing the hard disk

Before replacing the hard disk, the power supply must be turned off.

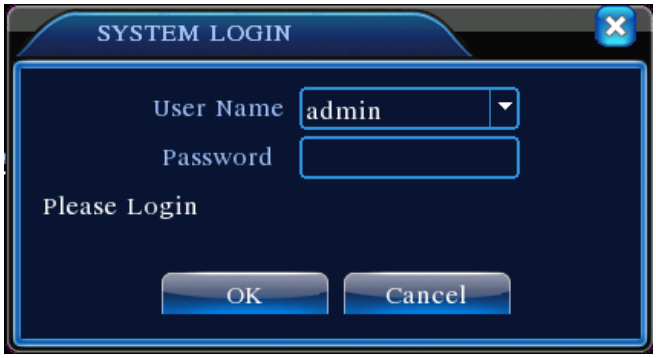
3、Replacing the battery

Before replacing the battery, the settings information should be saved and then the power supply should be switched off. The DVR uses a button battery. The system time should be checked regularly. If the time is not correct you should replace the battery, we recommend replacing the battery every year and using the same battery type.

Note: The setting information must be saved before replacing the battery otherwise information will be lost.

3.3 System Login

When the DVR starts up, the user should login by pressing the MENU button on the remote control or control panel. There are three user settings; the user name options are **admin**, **guest** and **default** and these names have no password. **Admin** is the super user; **guest** and **default**'s permissions are limited to preview and video playback. User **admin** and **guest**'s password can be amended, while their permissions can't be revised; user **default** is the default login user whose permission can be revised but not its password.



Picture 3.1 System Login

Password protection: If the password is entered wrongly three times, the alarm will sound. If the password is entered wrongly five times, the account will be locked. (Restarting the DVR or after a half hour, the account will be unlocked automatically).

For your system security, please modify your password after first login.

3.4 Preview

You can right click mouse to choose the switch between the windows.

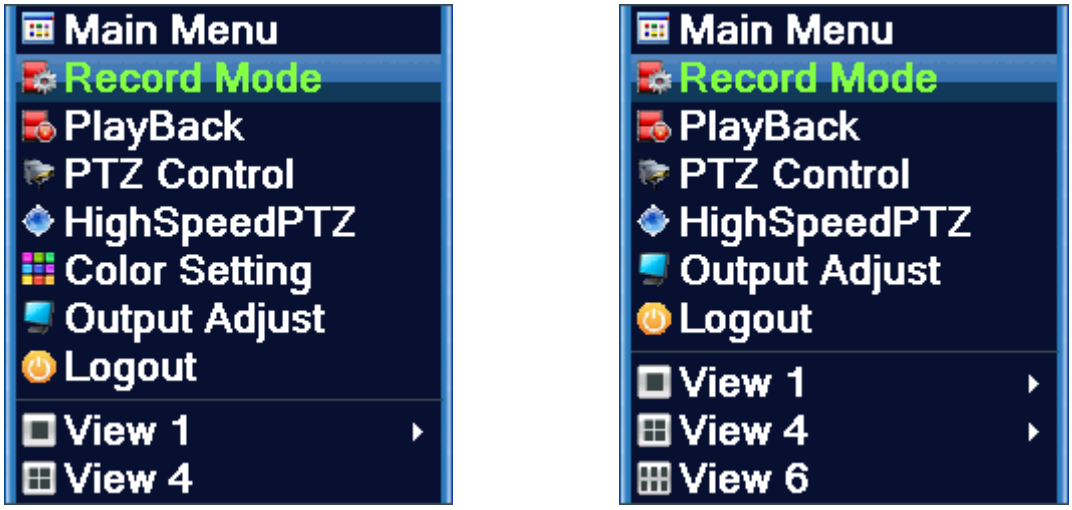
The system date, time and channel name are shown in each viewing window. The surveillance video and the alarm status are shown in each window.

1		Recording status	**3**		Video loss
2		Motion detect	**4**		Camera lock

Table 3.1 Preview icon

3.5 Desktop shortcut menu

In preview mode you can right click mouse to get a desktop shortcut menu. The menu includes: **main menu, record mode, playback, PTZ control, High Speed PTZ, Alarm Output, color Setting, Output adjust, Logout, view mode shift .**



Shortcut under Hybrid mode Shortcut menu under full digital mode

Picture 3.2 Shortcut Menu

3.5.1 Main menu

When you login, the system main menu is shown as below.

Picture3.3 Main Menu

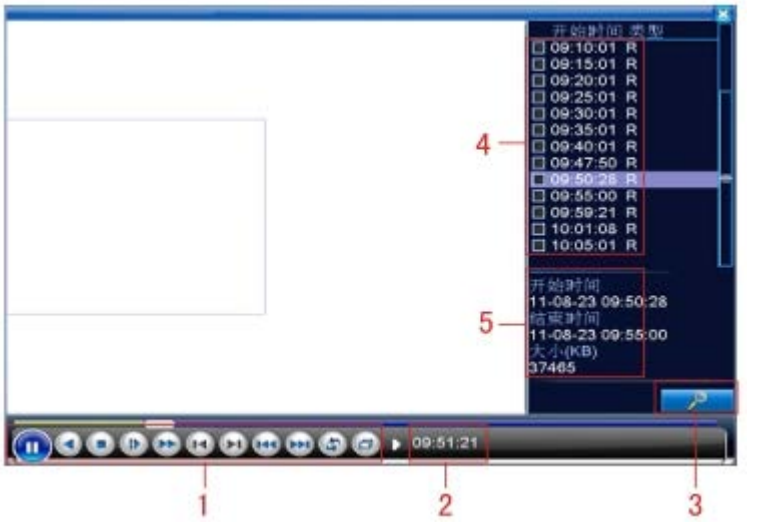
3.5.2 Playback

There are two methods for you to playback the video files in the hard disk.

1、 In the desktop shortcut menu.

2、 Main menu>Record->Playback

Note: The hard disk that saves the video files must be set as read-write or read-only state.(4.5.1)



Picture 3.4 video playback

1. Playback control 2. Operation hint 3. file searching

4. listed files 5. file information

【Listed files】Look up the listed files that accord with the searching criteria.

【File information】Look up the found file information.

【Playback control】See details in chart below

Key	Function	Key	Function
/	Play/Pause		Backward play
	Slow forward		Fast forward
	Previous frame		Next frame
	Previous file		Next file

	Round play		Full screen
	Stop		

Picture 3.5 Playback control key

Note: play under frame by frame, the playback status should be paused firstly.

【Operation tips】show function of the key that cursor placed.

Special functions：

Accurate playback： Input time (h/m/s) in the time column and then click play button. The system can operate accurate playback according to the searching time.

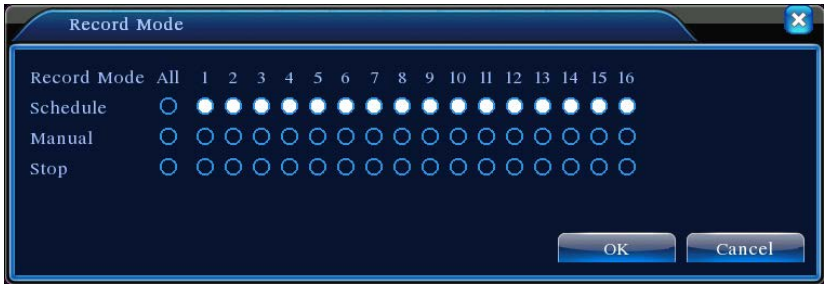
Local zoom： When the system is in single-window full-screen playback mode, you can drag your mouse in the screen to select a section and then left click mouse to realize local zoom. You can right click mouse to exit.

Note: When current resolution of the channel is over Max resolution, to playback this channel, will show a Red "X".

3.5.3 Record Control

Please check current channel status: "○" means it is not in recording mode, "●" means it is in recording mode.

You can use the desktop shortcut menu or click [main menu]> [recording function]> [recording set] to enter the recording control interface.



Picture 3.8 Record Mode

【Schedule】Record according to the configuration.

【Manual】Click the all button and the according channel is recording no matter the channel state.

【Stop】Click the stop button and the according channel stops recording no matter the channel state.

3.5.4 Alarm output

Please check current channel status: "○" means it is not in alarm status, "●" means it is in alarm status.

You can use the desktop shortcut menu or click [main menu]> [alarm function]> [alarm output] to enter the alarm output interface.

Picture 3.9 alarm output

【Configuration】Alarm is on according to the configuration.

【Manual】Click the "All" button and the corresponding channel is alarmed no matter the channel in any state.

【Stop】Click the stop button and the according channel stops alarming no matter the channel in any state.

3.5.5 PTZ control

***PTZ control is a little different between hybrid mode & full digital mode:**
Digital channel – the digital channel need link PTZ, the remote device should connect with PTZ and with protocol correctly set also.
Analog channel – Only when the device is connect with PTZ and configure protocol correctly is ok.

Operation interface is as followed. The functions include: PTZ direction control, step, zoom, focus, iris, setup operation, patrol between spots, trail patrol, boundary scan, assistant switch, light switch, level rotation and so on.

Note1. Decoder A(B)line connects with DVR A(B)line. The connection is right.

2. Click [main menu] >[system configuration] >[PTZ setup] to set the PTZ parameters.

3. The PTZ functions are decided by the PTZ protocols.

Picture 3.10 PTZ setup

【Speed】Set the PTZ rotation range. Default range: 1 ~ 8.

【Zoom】Click / button to adjust the zoom multiple of the camera.

【Focus】Click / button to adjust the focus of the camera .

【Iris】Click / button to adjust the iris of the camera.

【Direction control】Control the PTZ rotation. 8 directions control is supportive.(4 directions in Front panel is supportive)

【High speed PTZ】Full-screen show channel image. Left press mouse and control PTZ to rotate orientation. Left press mouse and then rotate the mouse to adjust the zoom multiple of the camera.

【Set】Enter the function operation menu.

【Page switch】Switch between different pages.

Special functions：

1、Preset

Set a location for the preset, calls the preset points, PTZ automatically turns to the setting position

1）Preset option

Set a location for the preset, procedure is as follows:

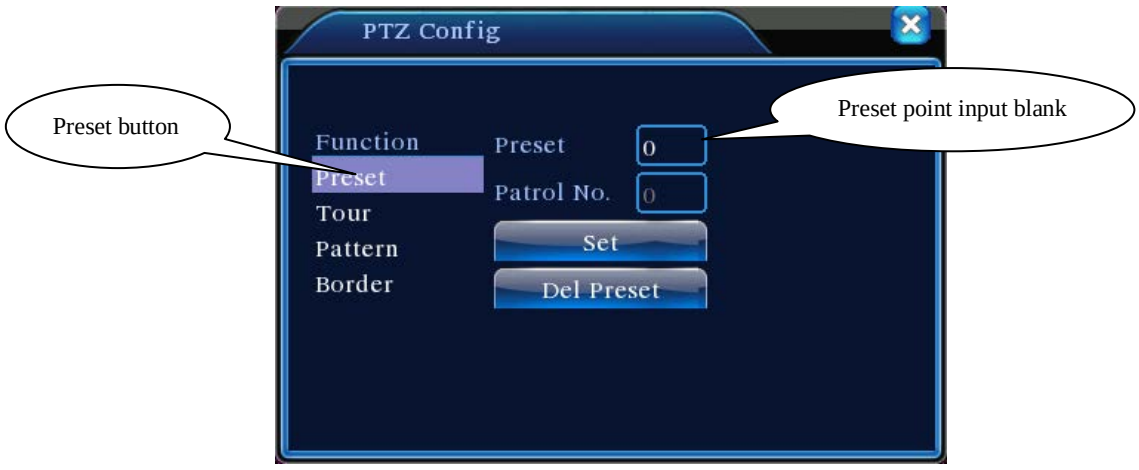
Step1: in Picture 3.10, click the Direction button will turn into preset position , click the Settings button to enter Picture 3.11.

Step 2: click the Preset button , then write the preset points in the input blank,

Step 3: click Settings button, return the Picture 3.10 Complete setup, that is the preset points and

preset position corresponds.

Clear Preset：Input preset points, click Remove button, remove the preset。



Picture 3.11 Preset Settings

2）Preset Point Calls

In Picture 3.10, click Page Shift button, enter PTZ control interface as shown in Picture 3.12. In the input blank, write the preset points, then click Preset button, PTZ turn to the corresponding preset point.

Picture 3.12 PTZ Control

2、Cruise between Points

Multiple preset points connected cruise lines, call cruise between points, the PTZ run around on the line

1）Cruise Between Points Settings

Cruise lines is connected by multiple preset points, setting procedure is as follows:

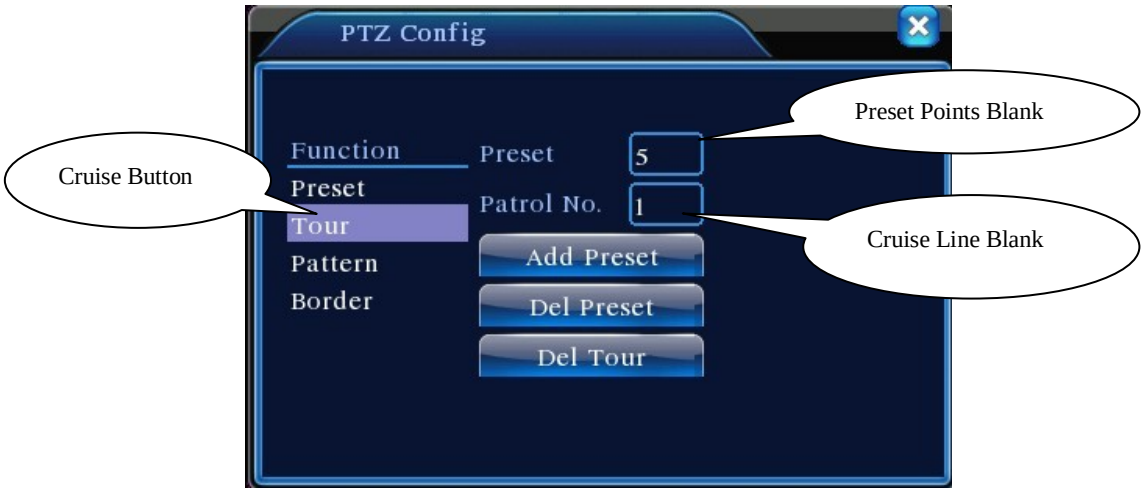
Step1: In Picture 3.10, the Direction key will turn PTZ to designated location , click Settings button to enter Picture 3.13,

Step 2: click Cruise buttons, the write proper value into the Cruise Line and Preset Points blank，then click Add Preset Points button, complete setting (also can add and delete cruise line which has been set up)

Step 3: repeat step1 and step2 , until set out all the preset designated cruise lines。

Remove Preset：Please input preset value in the blank, click Remove Preset button, then remove the preset points.

Remove Cruise Line：Input the number of cruise line, click Remove Cruise Lines button, then remove the cruise lines set。



Picture 3.13 Cruise Between Points Settings

2）The Calls of Cruise between Points

In Picture 3.10, click Page Shift button, enter PTZ control menu as shown in Picture 3.12. Please input the number of cruise in the value blank, then click Cruise between Points button, PTZ begins to work on the cruise line. Click Stop button to stop cruise.

3、Scan

PTZ also can work on the preset scan line repeatedly.

1）Scan setup

Step1：In Picture 3.10, click Setup button ，enter Picture 3.14；

Step2：Click Scan button，the input proper value in the scan value blank;

Step3：Click Start button, enter Picture3.10，here you can set the following items: Zoom、Focus、Aperture、Direction and so on. Click Setup button to go back Picture 3.14；

Step4：Click End button to complete setup。Click the right button of the mouse to exit.

Picture 3.14 Scan Setup

2）Scan Calls

In Picture 3.10, click Page Shift button, then enter PTZ control menu as shown in Picture 3.12. Please input the number of scan in the value blank , then click Scan button，PTZ begins to work on the scan line . Click Stop button to stop.

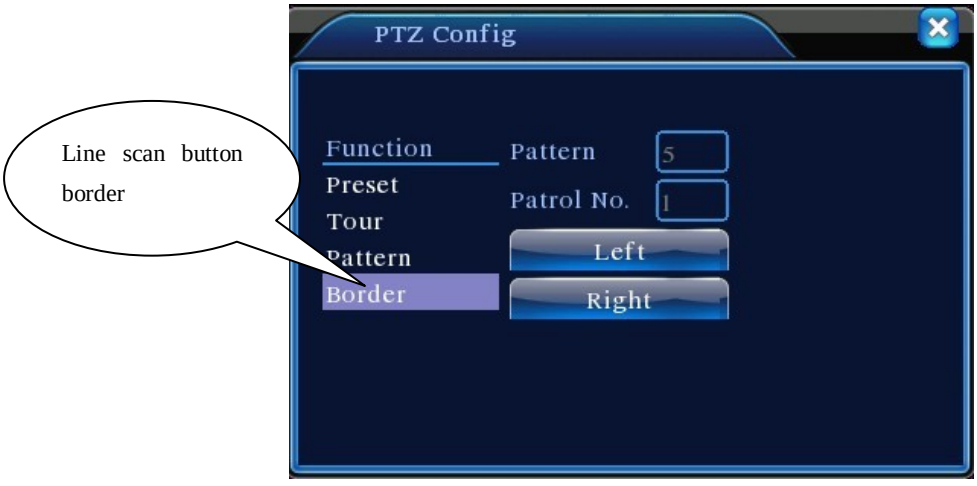
4、Boundary Scan

1）**Boundary Scan setup**

Step1：In Picture 3.10, click Direction button to turn the PTZ to preset direction, then click Setup button enter Picture 3.15, select the left boundary, return to Picture 3.10;

Step2：Please click direction arrows to adjust PTZ direction, click Setup button enter Picture3.15, then select the right boundary ,return to Picture 3.10;

Step3: Complete setup, that is the position of left and right boundary



Picture 3.15 Boundary Scan Setup

2）Boundary Scan Calls

In Picture 3.10, click Page Shift button, then enter PTZ control menu as shown in Picture 3.12. Please input the number of scan in the value blank , then click Scan button， PTZ begins to work on the scan line . Click Stop button to stop.

5、Horizontal Rotating

Click Horizontally Rotating button, PTZ begins to rotate horizontally (relative to the original position of the camera). Click the Stop button to stop.

6、Rotate

Click on horizontal Rotating button, PTZ turn around.

7、Reset

PTZ restart, all the data clears to 0.。

8、Page Shift

In Picture 3.12, click Page Shift button into Picture3.16, setting auxiliary function. Auxiliary number corresponding to auxiliary switch on the decoder.

Picture 3.16 Auxiliary Function Control

【Intuitive Auxiliary Operation】 choose auxiliary equipment, select Open or Close button, switch control；

【Auxiliary Number】The operation of corresponding auxiliary switch according to PTZ agreement；

【Page Shift】In Picture 3.16，click Page Shift button enter the Picture 3.17 PTZ Main Menu , the menu itself can be control by the menu control buttons

3.5.6 Color setting

Set the selective image parameters (current channel for single window display and cursor place for multi-window display). You can use the desktop shortcut menu and enter the interface. The image parameters include: tonality, brightness, contrast, saturation. You can set different parameters at different time sections.

Picture 3.18 Color Setting

3.5.7 Output Adjust

Hybrid mode is with black margin vertical & horizontal, while full digital mode without.

Adjust TV output area parameters. You can use the desktop shortcut menu or enter [main menu]> [management tools]> [Output adjust].

Hybrid Mode

Full digital Mode

Picture 3.19 Output Adjust

Note: The black margin vertical & horizontal at output adjust of hybrid mode is only effect to analog channel.

3.5.8 Logout

Logout, shut down the system or reboot. You can use the desktop shortcut menu or enter [main menu].

Picture 3.20 Logout/Shutdown/Reboot the system

【logout】Quit the menu. Requires password next login.

【shut down】Quit the system. Turn off the power supply.

When pressing the shut down button, there is a schedule hint. After three seconds, the system will shut down. If cancelled midway then no effect.

【reboot】Quit the system. Reboot the system.

3.5.9 Window switch

Preview in single window/four windows/eight windows/nine windows/sixteen windows according to your choice.

4 Main menu

4.1 Main menu navigation

Main menu	Sub menu	Function
Record	Config	Set the recording configuration, recording type, recording time section
	playback	Set recording search, recording play, video file storage
	Storage	Set screen capture period, type ,etc. **Note: Only hybrid mode have this function**
	backup	Detect backup device, format device, backup the selected files
Alarm	Motion detection	Set motion detect alarm channel, sensitivity, area, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot (**Note: only for hybrid mode)**, PTZ, patrol, buzz, email and FTP upload
	Video blind	Set camera mask alarm channel, sensitivity, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot **(Note: only for hybrid mode)**, PTZ, patrol, buzz, email and FTP upload
	Video loss	Set video loss alarm channel, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot **(Note: only for hybrid mode)**, PTZ, patrol, buzz, email and FTP upload
	Alarm input	Set alarm input channel, equipment type, linkage parameters: defending time section, alarm output, screen hint, recording, screen shot **(Note: only for hybrid mode)**, PTZ, patrol, buzz, email and FTP upload
	Alarm output	Set alarm mode: configuration, manual, shut down
	Exception handling	No HDD, HDD error, HDD capacity not enough, network cut, IP Conflict, linkage parameters, screen hint or buzz.
System configuration	General configuration	Set system time, data format, language, hard disk full time operation, machine number, video format, output mode, summer time, stay time

	Encode configuration	Set main (assistant) coding parameter: code mode, resolving ability, frame rate, code stream control, image quality type, code stream value, frame between value, video/audio enable, **Note: only hybrid mode with encode settings.**
	Network configuration	Set basic network parameters, DHCP and DNS parameters, network high speed download
	NetService	PPPOE、NTP、Email、IP purview、DDNS parameter
	GUI display	Set channel title, preview hint icon state, transparency, cover area, time title, channel title fold. **(Note: only hybrid mode can set channel title, cover area, time title, channel title fold)**
	PTZ configuration	Set channel, PTZ protocol, address, baud rate, date bit, stop bit, check **(Note: Hybrid mode shows: PTZ configuration)**
	RS485 Device	Set protocol, address, baud rate, date bit, stop bit, check **(Note: Full digital mode shows : RS485 Device)**
	Serial port Configuration (RS232)	Set serial port function, baud rate, date bit, stop bit, check
	Tour	Set patrol mode and interval time
	Digital manage	Set channel mode, check channel status and configure the digital channel, etc.
Management tools	Hard disk management	Set appointed hard disk as read-write disc, read-only disc or redundant disc, clear data, resume date and so on
	User management	Modify user, team or password. Add user or team. Delete user or team.
	Online user	Break the connection with the already logged in user. Lock the account after break until booting up again.

	Output adjust	Adjust upside, downside, nearside, starboard distance, black margin vertical & horizontal **(Note: Only hybrid mode with black margin vertical & horizontal)**
	Automatic maintenance	Set automatic reboot system and automatic deleting files.
	Restore	Resume setup state: common setup, code setup, recording setup, alarm setup, network setup, network service, preview playback, serial port setup, user management
	Device information	To configure the hardware information of device.
System information	Hard disk information	Display hard disk capability and recording time
	Code stream statistics	Display code stream information
	Log information	Clear all log information according to the log video and time
	Edition information	Display edition information
Shut down		Logout, shut down or reboot

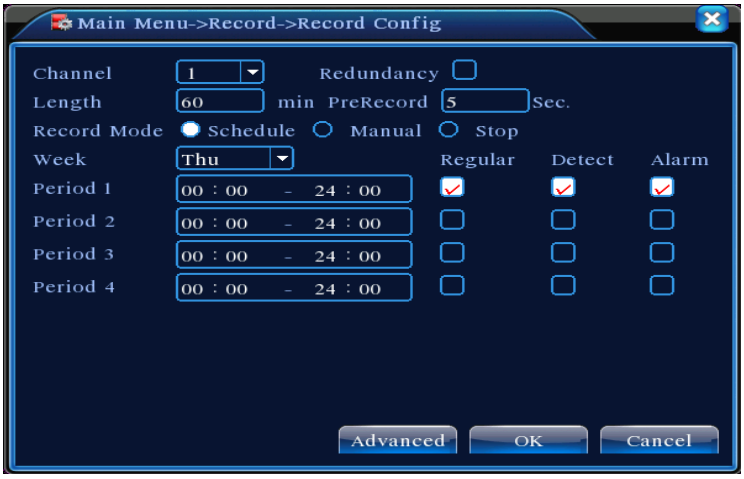
4.2 Record

Operations related to record, including: Record, Playback, Backup, Screen shot (Only for Hybrid mode)

4.2.1 Record Config

Set the recording parameters in the surveillance channel. The system is set 24 hours consecutive recording in the first startup. You can enter [main menu]> [recording function]> [recording setup] to set.

Note：There is at least one read-write hard disk.（refer to chapter 4.5.1）



Picture 4.1 Record Config

【Channel】Choose the corresponding channel number to set the channel. Choose the all option to set all channels.

【Redundancy】Choose the redundancy function option to implement the file double backup function (if available). Double backup is writing the video files in two hard disks. When you do the double backup, make sure that there are two hard disks installed. One is read-write disk and the other is redundant disk. (refer to 4.5.1)

【SD card record】Device input with SD card, enable SD card for record to start recording.

【Length】Set the time length of each video file. 60minutes is default value.

【Pre-Record】Record 1-30 seconds before the action. (time length is decided by the code stream)

【Record mode】Set video state: schedule, manual or stop.

Schedule: Record according to the set video type (common, detection and alarm)and time section.

Manual: Click the button and the according channel is recording no matter the channel in any state.

Stop: Click the stop button and the according channel stops recording no matter the channel in any state.

【Period】Set the time section of common recording, The recording will start only in the set range.

【Record type】Set recording type: regular, detection or alarm.

Regular: Perform the regular recording in the set time section. The video file type is “R”.

Detect: Trigger the “motion detect”, “camera mask” or “video loss” signal. When above alarm is set as opening recording, the “detection recording” state is on. The video file type is “M”.

Alarm: Trigger the external alarm signal in the set time section. When above alarm is set as opening recording, the “detection recording” state is on. The video file type is “A”.

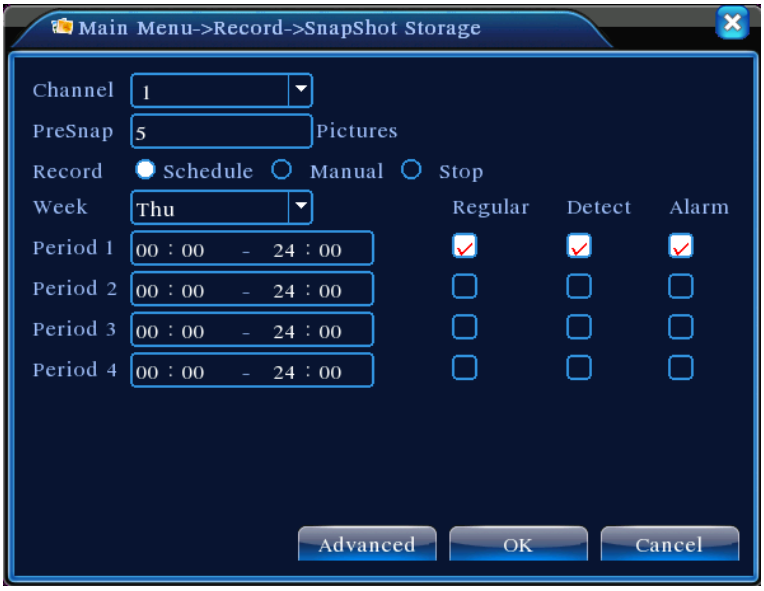
Note：Refer to chapter 4.3 to set corresponding alarm function.

4.2.2 Snapshot Storage

When device set as Hybrid mode, there will be snapshot storage function in record, while only analog channel have this snapshot storage function.

Setup snapshot parameters for different channels. The default is set for 24 hours snapshot continuously; go to Main Menu->Record->Snapshot Storage for appropriate settings.

Note: For normal snapshot storage, setup Snap at Main Menu->Advanced->Snapshot(refer to chapter 4.5.1 HDD Manage)



Picture 4.2

【Channel】Select the related channel to set,click "all" to set all channels.

【Presnap】Setup presnap picture quantity before recording,default is 5 pieces.

【Record】Set record status,"Schedule","Manual" and "Stop"

Schedule: Realise snapshot according to record type(regular,detect and alarm) and period.

Manual: No matter what the present channel is in a state,once choose "manual" button,it will have snapshot at related channels.

Stop: No matter what the present channel is in a state,once choose "stop" button,it will stop snapshot at related channels.

【Period】Set normal record period,it only startup Snapshot Storage at set period.

【Type】Three types:regular,detect and alarm

【Record type】Three types:regular,detect and alarm

Regular: snapshot at set period

Detect:snapshot at set period when motion detect,video blind and video loss which are preset for snapshot enable.

Alarm:snapshot at set period when alarm in which is preset for snapshot enable.

Note:for related alarm function,pls refer to chapter 4.3.

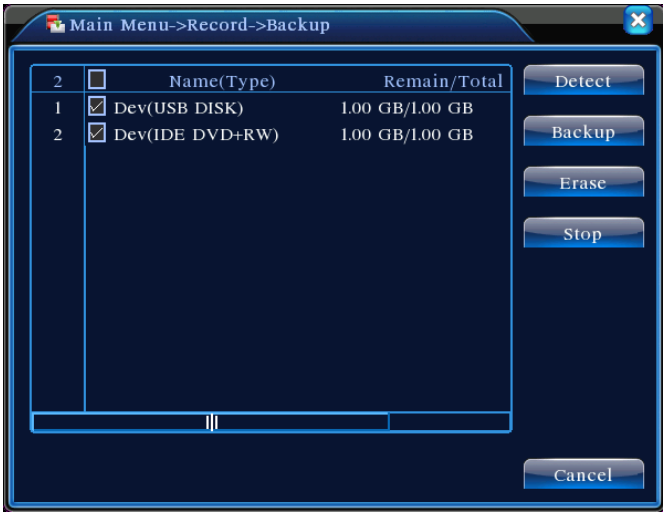
4.2.3 Playback

Refer to chapter 3.5.2.

4.2.4 Backup

You can backup the video files to external storage through setup.

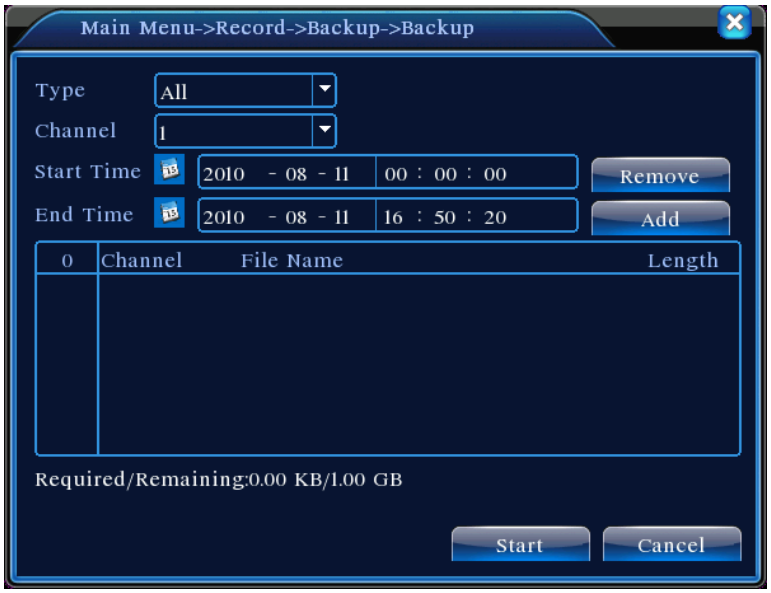
Note：The storage must be installed before the file backup. If the backup is terminated, the already backup can playback individually.



Picture 4.3 Backup

【Detect】Detect the storage connected with the DVR such as hard disk or universal disk.

【Backup】Click backup button and the dialog box is popped up. You can choose the backup file according to the type, channel and time.



Picture 4.4 File Backup

Remove：Clear the file information.

Add：Show the file information satisfying the set file attributes.

Start/pause：Click the play button to start the backup and click the pause button to stop the backup.

Note：During backup you can exit the page layout to carry out other functions.

[Imprinting**]** click imprinting, will copy the record of related channel

【Erase】Choose the file to delete and click erasure to delete the file.

【Stop】Stop the backup.

4.3 Alarm Function

Alarm functions include: motion detect, video blind, video loss, alarm input and alarm output.

4.3.1 Motion Detect

When system detects motion that reaches the set sensitivity, the motion detect alarm is on and the linkage function is turned on.

***Motion detect function is different between Hybrid mode & Full digital mode:**
Digital channel: not only to enable motion detect function at local side, but also to enable the remote device that was connected. when remote device detect motion movement, local side will start alarm recording, otherwise this function is not enable.
Hybrid mode: only need to enable motion detect function at local side.

Picture 4.4 Hybrid mode(4+2) Motion Detect

Full digital mode Motion Detect

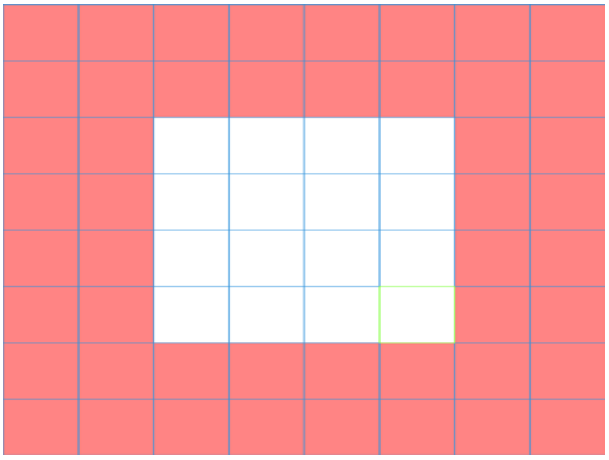
【Channel】Choose the set motion detect channel.

【Enable】■ means that the motion detect function is on.

【Sensitivity】Choose in the six options according to the sensitivity.

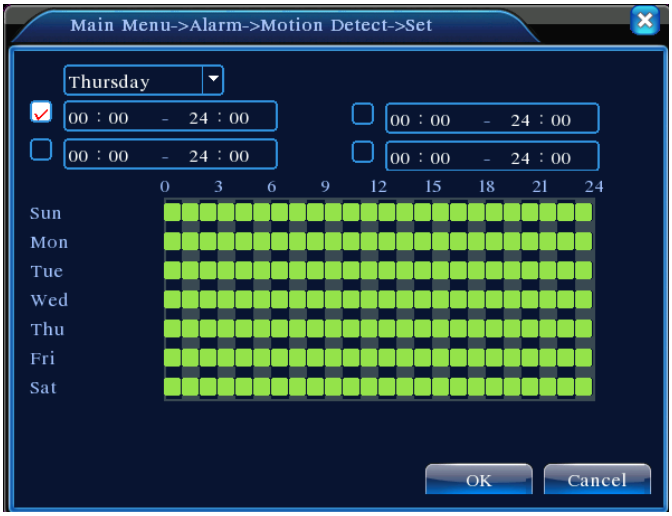
【Region】Click [set] to enter the set area. The area is divided into PAL22X18. Red block means the motion detect defensive area. White block means the unfenced area. You can set the area as followed, Drag the mouse and draw the area. Default: all selected blocks are detection area.

Note: Only the motion detect under hybrid mode have this function of setting region, and also only the analog channel can set region.



Picture 4.5 Region

【Period】Trigger the motion detect signal in the set time section. You can set according to week or set uniformly. Each day is divided into four time sections.■ means the set valid.



Picture 4.6 set the time section

【Interval】Only one alarm signal is turned on even there are several motion detect signals in the set interval.

【Alarm output】Start the external equipment of corresponding linkage alarm when the motion detect alarm is turned on.

【Delay】Delay a few moments and stop when the alarm state is turned off. The range is 10~300 seconds.

【Record channel】Choose the recording channel (multiple option supportive). Trigger the video signal when the alarm is turned on.

Note: Set in the [recording setup] and perform the linkage recording. Start detecting video files in the corresponding time section.

【Tour】■ means that the selective channel is single window alternate patrol preview. The interval is set in the [Main Menu]>[System] > [Tour].

【Snapshot】Choose record channels, when alarm happens, system triggers related channels for snapshot signal.

Note: For Snapshot activation, please go to set period, detect and alarm enable at Main Menu-> Record->Record configure,

***Snapshot is only at motion detect under hybrid mode, snapshot shows only analog channel.**

【PTZ Activation】Set the PTZ activation when the alarm is turned on.

Note:PTZ activation is set in the [shortcut menu] >[PTZ control]. Set the patrol between spots, trail patrol and so on.

***Hybrid mode, PTZ link to the related PTZ information of analog channel, While digital**

channel model, the PTZ is link to the related PTZ information on the remote device connected.

Note：to link PTZ, need go [Shortcut menu]->[PTZ control] to set preset point, cruise between points & interval time, etc.

Picture 4.8 PTZ Activation under hybrid mode

【Delay】When alarm is over,recording will last some seconds(10~300sec),then stop.

【Show message】Pop the alarm information dialog box in the local host computer screen.

【Send EMAIL】■ means sending an email to user when the alarm is turned on.

Note: Set in the [NetService] and send email.

【FTP upload】to tick it, the video & picture of related record channel & snapshot channel will be uploaded to assigned position.

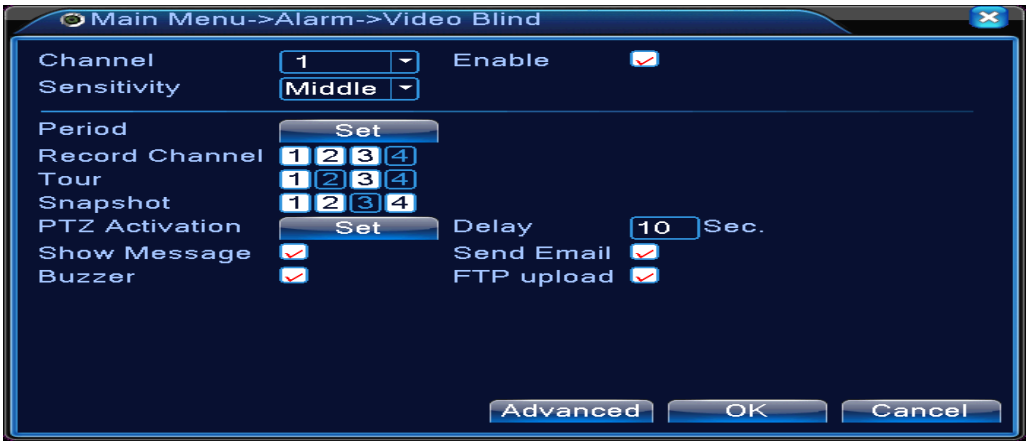
Note：FTP upload need be set at [Netservice]

【Buzz】When alarm happens, device will come out with buzz.

4.3.2 Video Blind

When the video image is influenced by the environment such as bad brightness or reaching the set sensitivy parameter, the camera mask function is turned on and the linkage function is turned on.

***Same as motion detect function, video blind is different between Hybrid mode & Full digital mode:**
Digital channel: not only to enable video blind function at local side, but also to enable the remote device that was connected. when remote device with video blind, local side will start alarm recording, otherwise this function is not enable.
Hybrid mode: only need to enable video blind function at local side.



Video Blind under Hybrid mode(4+2)

Video blind under full digital mode

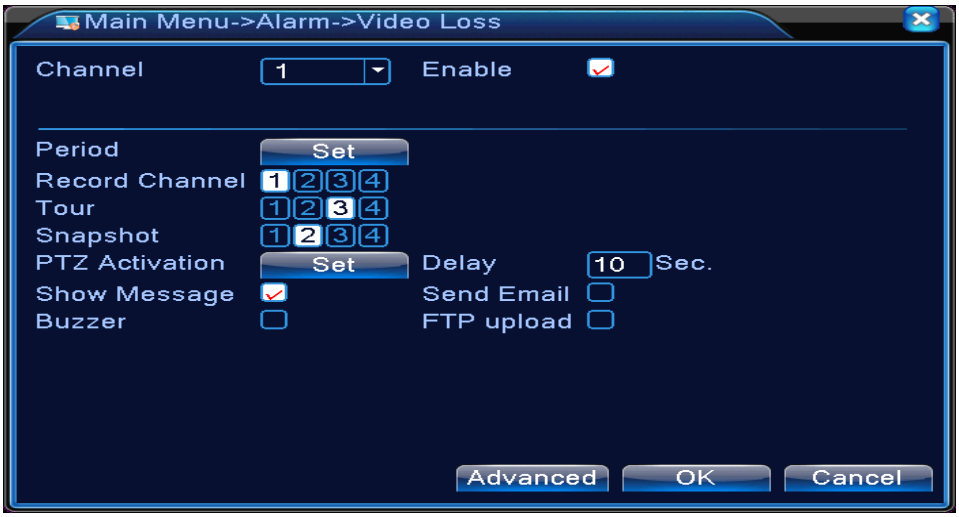
Set method: refer to chapter 4.3.1. Motion detect

Note: "Advanced" button is the same as right click.

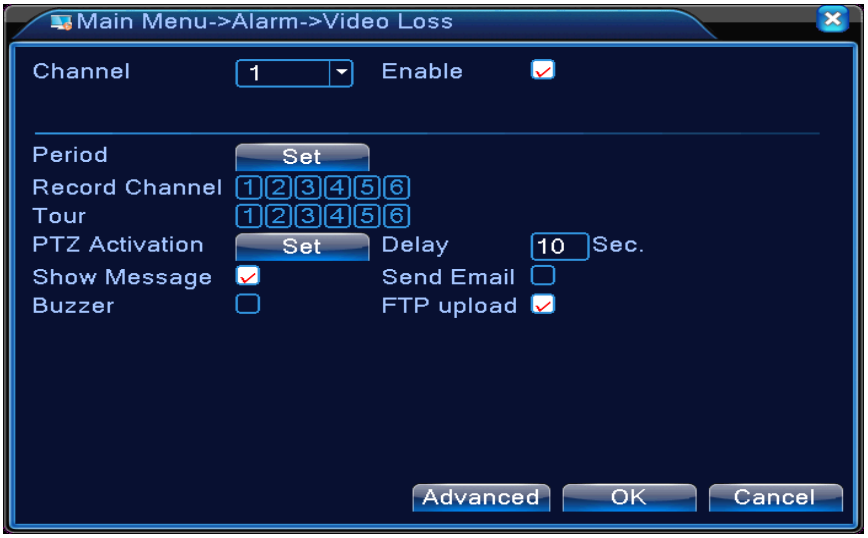
4.3.3 Video Loss

When the equipment can not obtain the channel video signal, the video loss alarm is turned on and the linkage function is turned on.

***Same as motion detect function, video loss is different between Hybrid mode & Full digital mode:**
Digital channel: not only to enable video loss function at local side, but also to enable the remote device that was connected. when remote device with video loss, local side will start alarm recording, otherwise this function is not enable.
Hybrid mode: only need to enable video loss function at local side.



Video loss under Hybrid Mode (4+2)



Video loss under full digital mode

Picture 4.10 Video loss

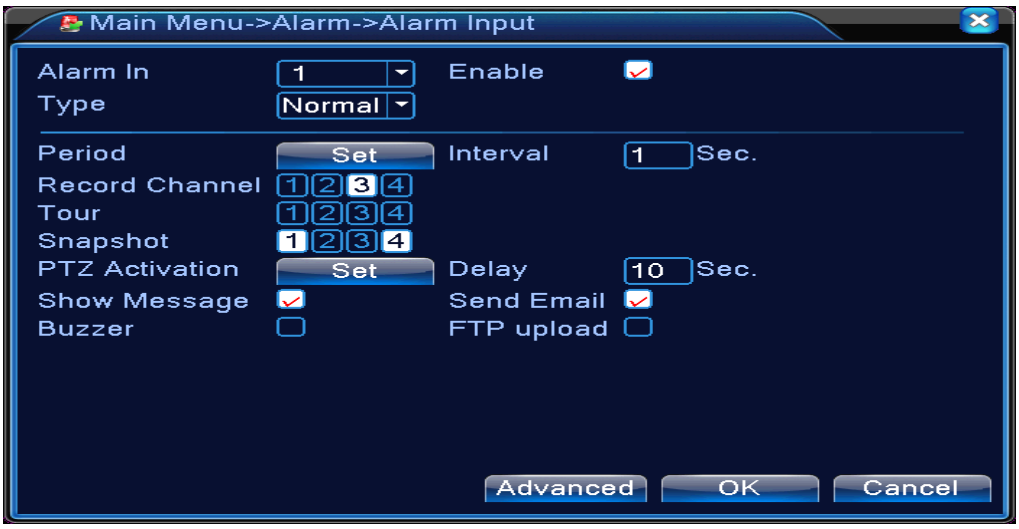
Set method: refer to chapter 4.3.1. Motion detect

Note: "Advanced" button is the same as right click.

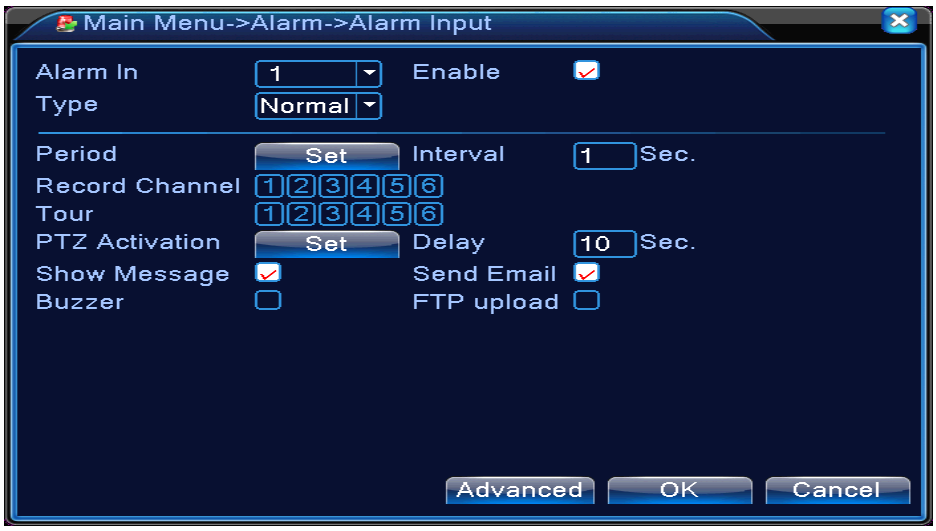
4.3.4 Alarm input

When the equipment obtains the external alarm signal, the alarm function is turned on.

***Alarm input is the same between hybrid mode & full digital mode, function enable, when it was set normal, only need to connect alarm sensor at alarm input port on local side, the alarm information is occurring, and will link to related setting functions at the same time**



Alarm input under hybrid mode(4+2)



Alarm input under full digital mode

Picture 4.11 Alarm input

Set method: refer to chapter 4.3.1. Motion detect

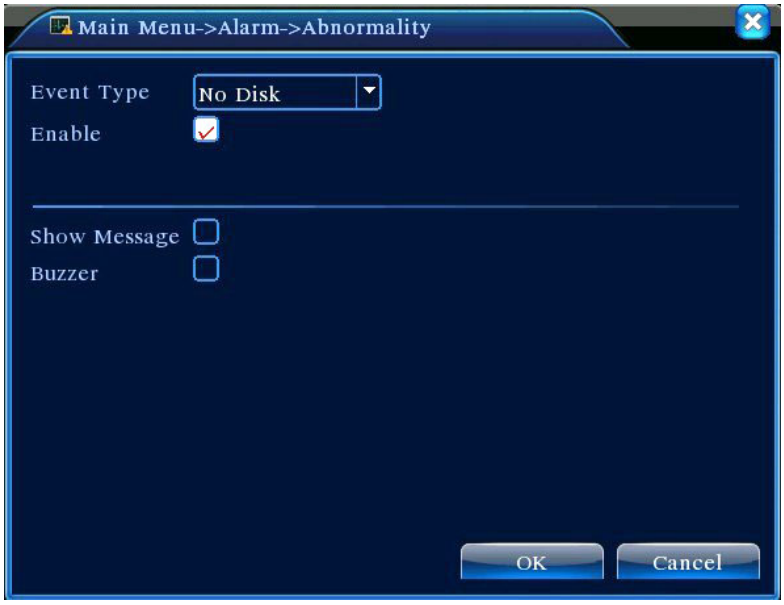
Note: "Advanced" button is the same as right click.

4.3.5 Alarm output

Refer to chapter 3.5.4.

4.3.6 Abnormal

Analysing and inspecting current software and hardware of the device: When some abnormal events happen,the device will make a relative answer such as show message and buzzer.



Picture 4.12 Abnormal

【Event Type】 selecting abnormity you want to inspect

【Enable】 Select it to make sure abnormal function workable

【Show message】 Automatically alarm cue dialog box come out of the main screen

【Buzzer】 Device will have two long nosie “di di” while alarm is happening

4.4 System setup

Set the system parameters such as **General, Encode, Network, Net service, GUI display, PTZ configure/RS485 device, RS232 and Tour setup, Digital Manage**.

4.4.1 General

Picture 4.13 General setup

【System time】Set the system data and time.

【Date format】Choose the data format: YMD, MDY, DMY.

【Date Separator】Choose list separator of the data format.

【Time Format】Choose time format: 24-hour or 12-hour.

【Language】

Arabic,Czech,English,Finnish,Greek,Indonesian,Italian,,Japanese,Portuguese,Russian,Thai,T-Chinese,S-Chinese,Turkish,Brazilian,Bulgarian,Farsi,French,German,Hebrew,Hungarian,Polish,Romanian,Spanish,Swedish,Vietnamese

【HDD full】Choose stop record: Stop recording when the hard disk is full.

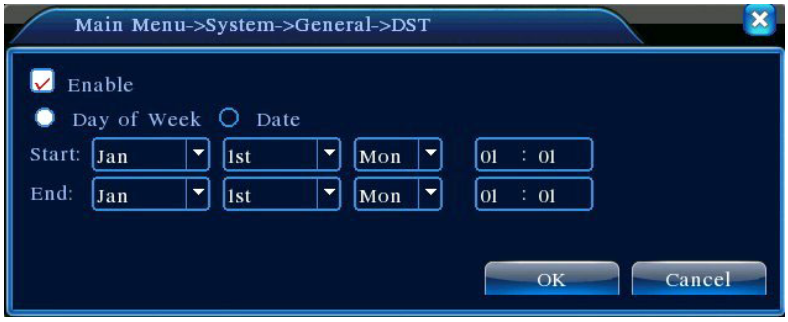
Choose overwrite: Cover the earliest recording files and continue recording when the hard disk is full.

【DVR No.】Only when the address button in the remote controller and the corresponding DVR number is matched, the remote operation is valid.

【Video Standard】PAL or NTSC.

【Auto Logout】Set the latency time in 0-60. 0 means no latency time.

【DST】Choose the summer time option and pop the dialog box as followed.



Picture 4.14 DST (week)

Picture 4.15 DST (date)

4.4.2 Encode setup

There is Encode settings at hybrid mode only, encode settings is for analog channel only.

Set the video/audio code parameter: video file, remote monitoring and so on. Set every main stream parameter in the left part, and set the extra stream parameter in the right part.

Note: extra stream introduces video compression technique which was applying for multi-channel playback simultaneously, Dial-up multi-channel real-time monitor under poor bandwidth, or mobile monitor and so on.

Picture 4.16 Encode setup

【Channel】Choose the channel number.

【Compression】Standard H.264 main profile.

【Resolution】Resolution type:D1/ HD1/CIF / QCIF.

【Frame Rate】P:1 frame/s~25 frame/s; N: 1 frame/s~30 frame/s

【Bit Rate Type】You can choose limited code stream or variable code stream. When you choose the variable code stream there are six image quality options.

【Bit Rate】Set the code stream value to modify the image quality. The larger code stream value the better image quality.

D1（1000~1500kbps）,CIF（384~1500kbps）, QCIF(64~512kbps)

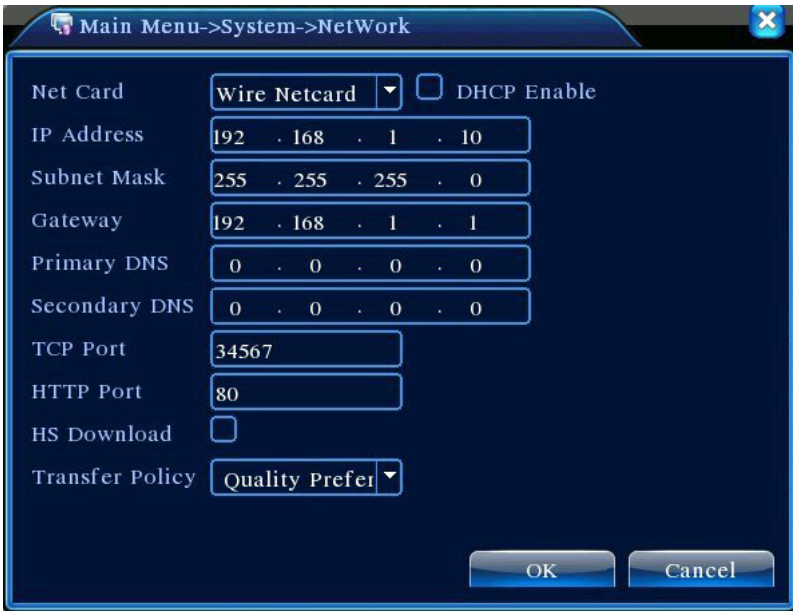
【Video/Audio】When the icons are all in reverse displayed, the video file is video and audio multiplex stream.

Extra stream Settings

【Extra stream】is used for client side monitoring & mobile monitoring.

【Channel title】select channel title and then to choose whether need enable video & audio. The resolution, frame rate, bit rate type settings is the same as main stream.

4.4.3 Network setup



Picture4.17 Network

【Net Card】You can choose cable network card or wireless network card.

【DHCP Enable】Obtain IP address automatically(not suggested)

Note： DHCP server is preinstalled.

【IP address】Set the IP address. Default: 192.168.1.10.

【Subnet mask】Set the subnet mask code. Default: 255.255.255.0.

【Gateway】Set the default gateway. Default: 192.168.1.1.

【DNS setup】Domain Name Server. It translates the domain name into IP address. The IP address is offered by network provider. The address must be set and reboot then it works.

【TCP port】Default: 34567.

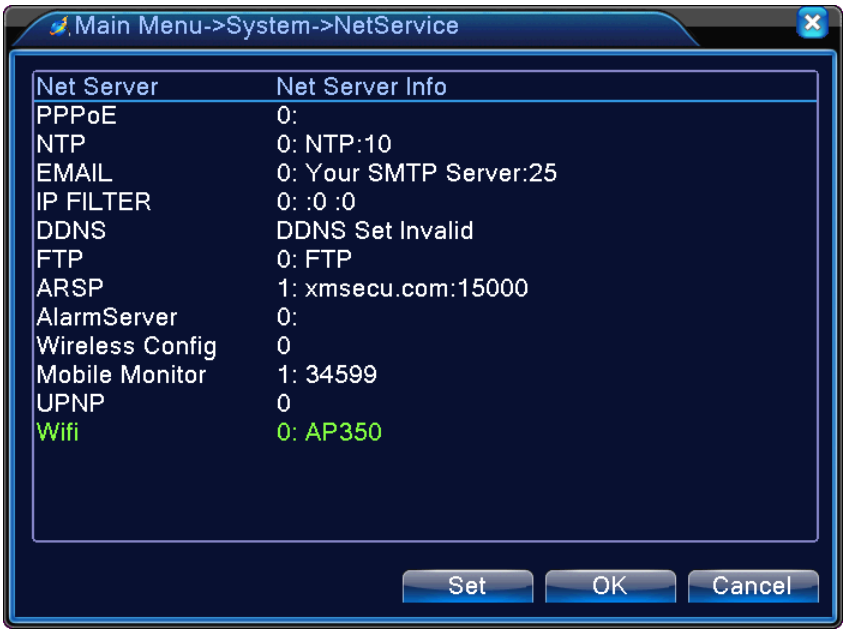
【HTTP port】Default: 80.

【HS Download】

【Transfer Policy】There are three strategies: self-adaption, image quality precedence and fluency precedence. The code stream will adjust according to the setup. Self-adaption is the tradeoff between the image quality precedence and fluency precedence. Fluency precedence and self-adaption are valid only when the assistant code stream is turned on. Otherwise image quality precedence is valid.

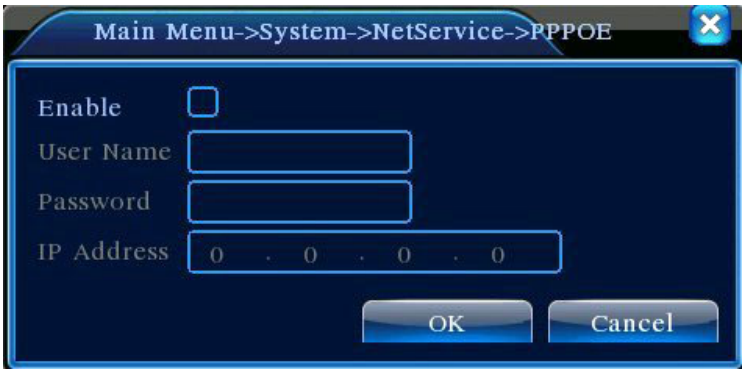
4.4.4 NetService

Choose the network service option and click the set button to configure the advanced network functions or double click the service button to configure the parameters.



Picture 4.18 NetService

【PPPoE setup】



Picture4.19 PPPOE

Input the user name and password that ISP（Internet service provider）provides. After saving it reboot up your system. Then the DVR will build a network connection based on PPPoE. The IP address will change into dynamic IP address after above operation is well done.

Operation：After PPPoE dialing successfully look up the IP address in the [IP address] and obtain the current IP address. Then use this IP address to visit the DVR through user port.

【NTP setup】

Picture 4.20 NTP

The NTP server must be installed in the PC.

Host computer IP: Input the IP address installed NTP server.

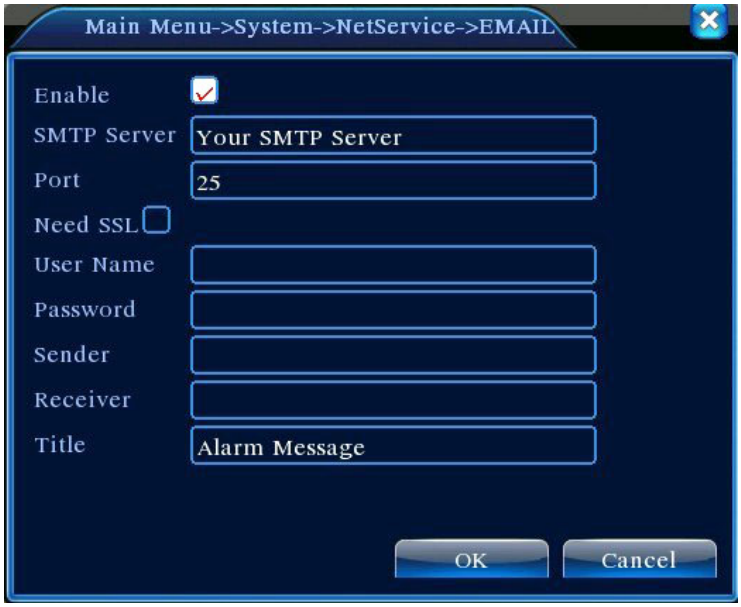
Port: Default: 123. You can set the port according to NTP server.

Time zone: London GMT+0 Berlin GMT +1 Cairo GMT +2 Moscow GMT +3 New Delhi GMT +5 Bangkok GMT +7 Hongkong Beijing GMT +8 Tokyo GMT +9 Sydney GMT +10 Hawaii GMT-10 Alaska GMT-9 Pacific time GMT-8 American mountain time GMT-7 American mid time GMT-6 American eastern time GMT-5 Atlantic time GMT-4 Brazil GMT-3 Atlantic mid time GMT-2.

Update Period: The same with the NTP server check interval. Default: 10minutes.

【EMAIL setup】

If the alarm is turned on or the alarm linkage photos are taken, send an email about the alarm information and the photos to appointed address.



Picture 4.21 EMAIL

SMTP server: Email server address. It could be an IP address or domain name. Domain name can be translated only it is the correct DNS configuration.

Port: Email server port number.

SSL: Decide whether using Secure Socket Layer protocol to login.

User Name: Apply the email server user name.

Password: Input the password corresponding to the user.

Sender: Set the email sender address.

Receiver: Send the email to appointed receivers when the alarm is turned on. You can set three receivers at most.

Title: You can set as you wish.

【IP Filter setup】

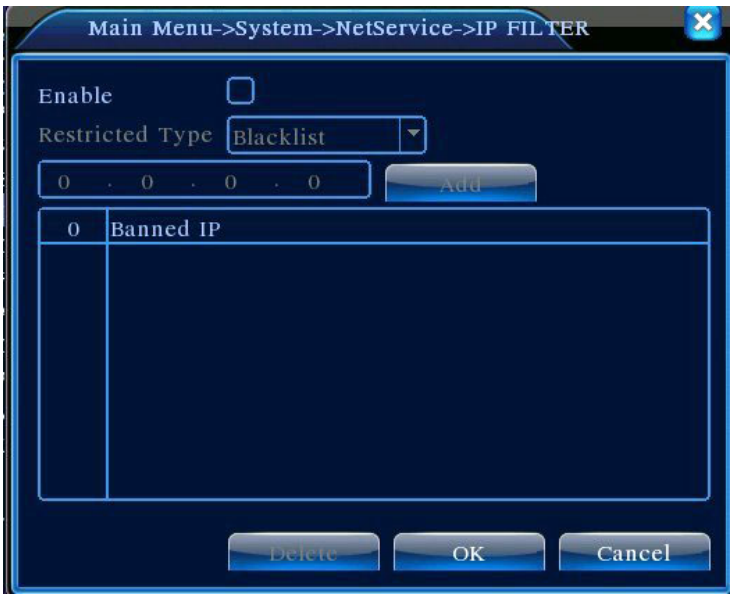
When choosing the white list, only the listed IP address can connect the DVR. The 64 IP addressed are supportive in the list.

When choosing the black list, the listed IP address can not connect the DVR. The 64 IP addressed

are supportive in the list.

You can delete the set IP address by √ in the options.

Note： When the same IP address is in the white and black list at the same time, the black list precedence is higher.



Picture 4.22 IP IP FILTER

【DDNS】

It is the abbreviation of dynamic domain name server.

Local domain name： Provide the domain name registered by DDNS.

User name： Provide the account registered by DDNS.

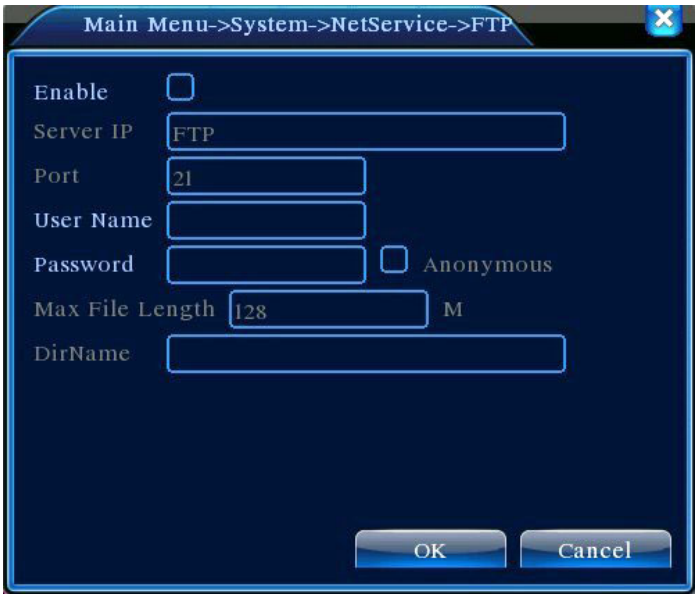
Password： Provide the password registered by DDNS.

When the DDNS is successfully configured and start, you can connect the domain name in the IE address column to visit.

Note：The DNS setup must be configured correctly in the network setup.

Picture 4.23 DDNS setup

【FTP setup】FTP is available only when alarm happens,or alarm activates record and snapshot,it will upload related record and snapshot pictures to FTP server.



Picture 4.24 FTP setup

【Enable】Click Enable,then all settings will be available

【Server IP】IP address for FTP server

【Port】Domain Port of FTP,default 21

【User Name】User name of FTP

【Password】Password of user

【Max File Length】Max length for upload files at every packed,default 128M

【DirName】Directory of uploading files

Note: The user should be with authority to upload files.

【ARSP】

Startup DDNS server to add devices and manage it in the DDNS server

[Type] choose "DNS"

[Enable]: ■ means it is chosen

[Sever IP]: IP address of DDNS server

[Port]: Port No. of device, related DDNS server listen port

[User name] the user name that device can log in DDNS server

[Password] the password related to the user name.

[Refresh cycle]: Time interval between device and DDNS when chynchronously.

Note: Please set up server before using DDNS.

【Alarm center】

When alarm occurring, report alarm information to alarm server.

图 4.23 报警中心设置

【Protocol type】GENERAL;

【Enable】To tick it means enable.

【Server IP】IP address of Alarm Server；

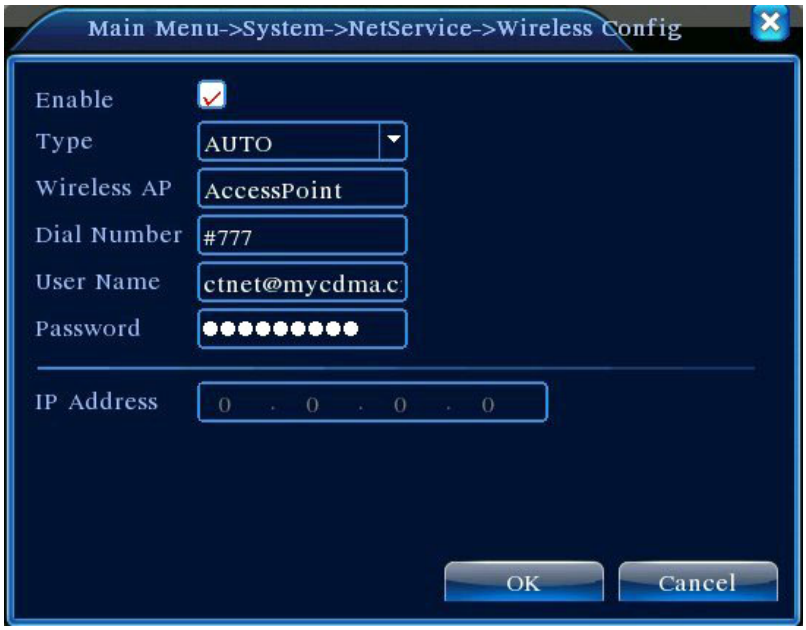
【Port】Device Port No.设备的端口号；

【Alarm Report】Tick it means to report alarm information to server.

【Log Report】Tick it, means to report log to server.

【Wireless Config】

ADSL through 3G net card,use CMS to visit and config the device



Picture 4.25 Wireless Config

【Enable】Choose Enable to make all settings available

【Type】Dial type,default AUTO

【Wireless AP】3G access point

【Dial Number】3G Dial Number

【User Name】User name of 3G

【Password】Password of dial user

【IP Address】IP address,got from dial

【Mobile Monitor Setup】

To visit the device by mobile,pls make a router mapping of this port and use CMS to monitor and operate it by protocol.

Picture 4.26 Mobile Monitor Setup

【Enable】 Select it to make sure abnormal function workable

【Port】 It's a port of mobile monitoring which you need to make a router mapping of if want to visit it by mobile

【UPNP】UPNP protocol can auto port forwarding on router,make sure UPNP is running on router before use it.

Picture 4.27

【Enable】Choose Enable to make sure all UPNP settings available

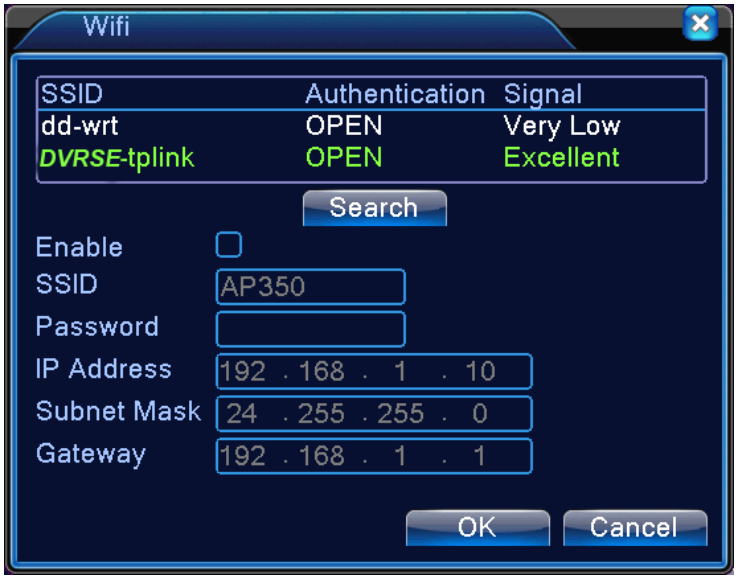
【HTTP】Route will automatically distribute HTTP port for the device,when IE viewing,it need this port(eg. 60.12.9.26:66)

【TCP】Router will automatically distribute TCP port for the device,when monitoring via CMS,it need this port.

【MobilePort】Router will automatically distribute Mobile Port for the device,when mobile monitor,it need this port.

【WIFI】

Through wireless network to connect with the DVR.



【Search】 search SSID of wireless LAN

【Enable】 Select it to enable the function

【SSID】 SSID name

【Password】 password of WIFI

【IP Address】 IP address of WIFI

【Subnet Mask】 Subnet mask of WIFI

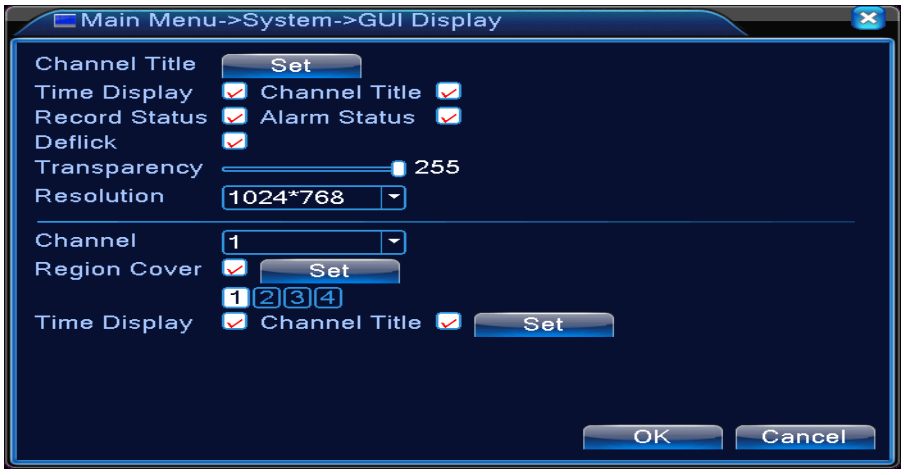
【Gateway】 Gateway of WIFI

4.4.5 GUI Display

Configure the video output parameters including the front output mode and code output mode.

Front output：In the local preview mode include: channel title, time display, channel title, record status, alarm status, bit rate info, transparency and region cover.

Code output：In the network surveillance and video file mode include: channel title, time display, channel title, record status, alarm status, bit rate info, transparency and region cover.



GUI display of Hybrid Mode

GUI display of Full digital mode

Picture 4.28 GUI Display

【Channel Title】Click the channel name modify button and enter the channel name menu. Modify the channel name. The 16 Chinese characters and 25 letters are supportive.

【Time Display】means the selective state. Display the system data and time in the surveillance window.

【Channel Title】means the selective state. Display the system channel number in the surveillance window.

【Record Status】means the selective state. Display the system recording status in the surveillance window.

【Alarm Status】means the selective state. Display the system alarm status in the surveillance window.

【Bit rate info】means the selective state. The ninth window displays the code stream information in

the nine-window preview status.

【Transparency】Choose the background image transparency. The range is 128~255.

【Resolution】set display resolution.

【Channel】Choose the set code output channel number.

【Region Cover】means the selective state. Click the cover area button and enter the corresponding channel window. You can cover the arbitrary using mouse. (Black region is for output)

【Time display】and 【Channel display】

***There is channel title, region cover, time display and channel display settings at GUI display under hybrid mode only**

4.4.6 PTZ settings / RS485 device

When system set as hybrid mode, it will shows with PTZ settings, including PTZ device & RS485 device.

Picture 4.29 PTZ config

【Channel】Choose the dome camera input channel.

【Protocol】Choose the corresponding dome protocol. (PELCOD as an example)

【Address】Set as the corresponding dome address. Default: 1.（Note：The address must be consistent with the dome address.）

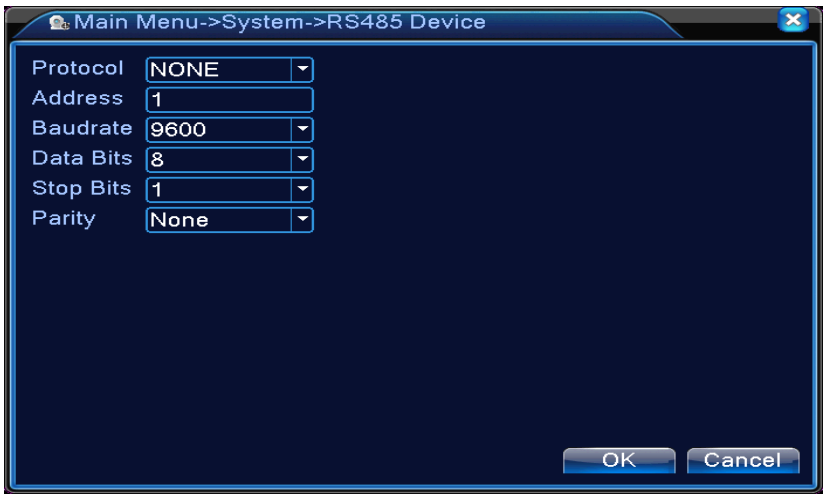
【Baudrate】Choose the corresponding dome baud rate length. You can control the PTZ and vidicion. Default: 115200.

【Data bits】Include 5-8 options. Default: 8.

【Stop bits】Include 2 options. Default: 1.

【Parity】Include odd check, even check, sign check, blank check. Default: void.

***When system set as full digital channel, it will show RS485 device only**



【Protocol】Choose protocol of related brand model(Example：DaHua)；

【Address】Set related address, default is 1；

【Baudrate】choose bardrate of related device, default is: 115200；

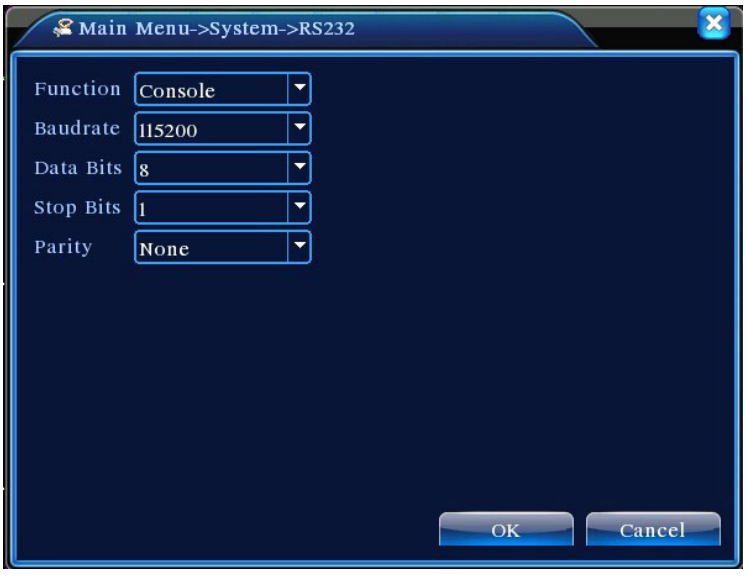
【Data bits】Include 5-8 options. Default: 8.

【Stop bits】Include 2 options. Default: 1.

【Parity】Include odd check, even check, sign check, blank check. Default: void.

Noted: when hybrid mode, PTZ config shows PTZ device and RS485 device, if full digital mode, there will be RS485 device only.

4.4.7 RS232 setup



Picture 4.30 RS232 setup

【Serial Port Function】Common serial port is used to debug and update program or set up specific serial port.

【Baud rate】Choose the corresponding baud rate length.

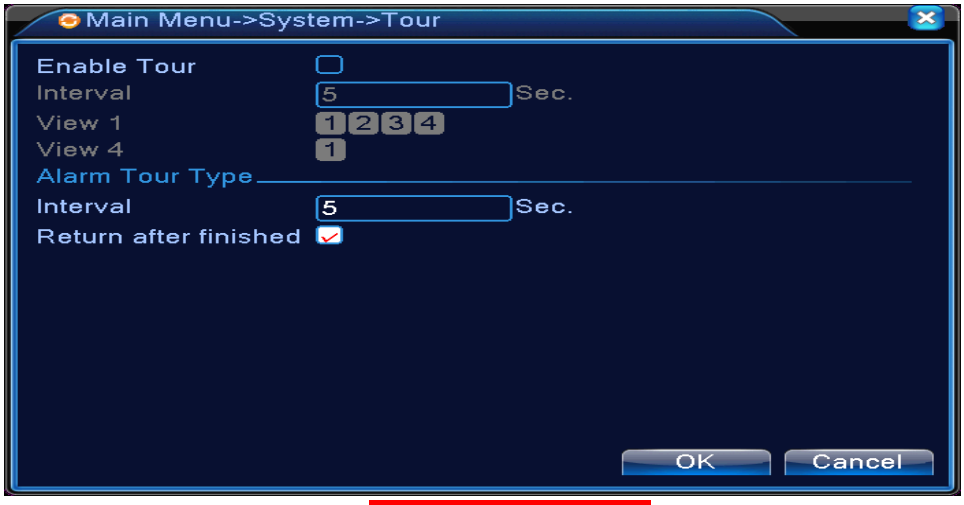
【Data bits】Include 5-8 options.

【Stop bits】Include 2 options.

【Parity】Include odd, even, mark, space. Default is void.

4.4.8 Tour setup

Set the patrol display. ■ means that the tour mode is turned on. You can choose the single view, four views or six views with single mode or hybrid mode tour.



Picture 4.31 tour setup

【interval】Set the patrol switch interval. The set range is 5-120 seconds.

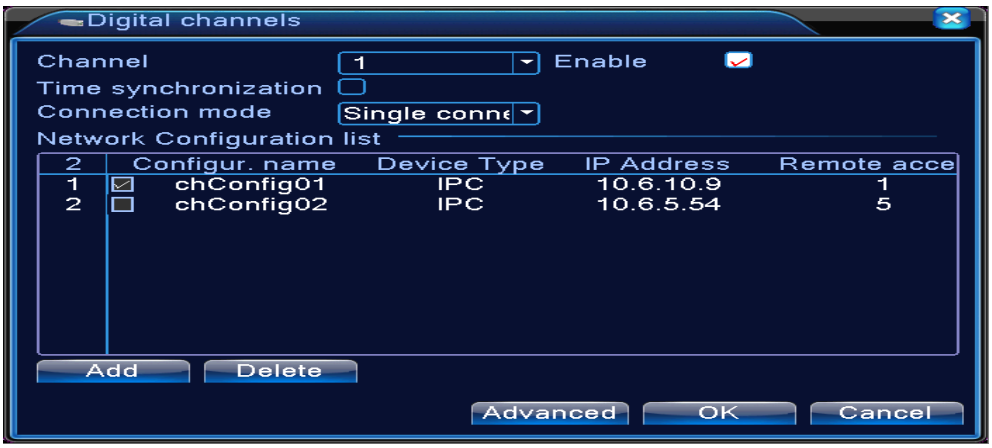
【Return after alarm】Tick it, when alarm ends system will shift back to 6 view interface.

Note: at preview mode, click / to turn on/off tour.（ mean turn on， mean turn off）。

4.4.9 Digital Manager

Digital l manage including : Digital channel, Channel status, Channel mode：

Digital Channels:

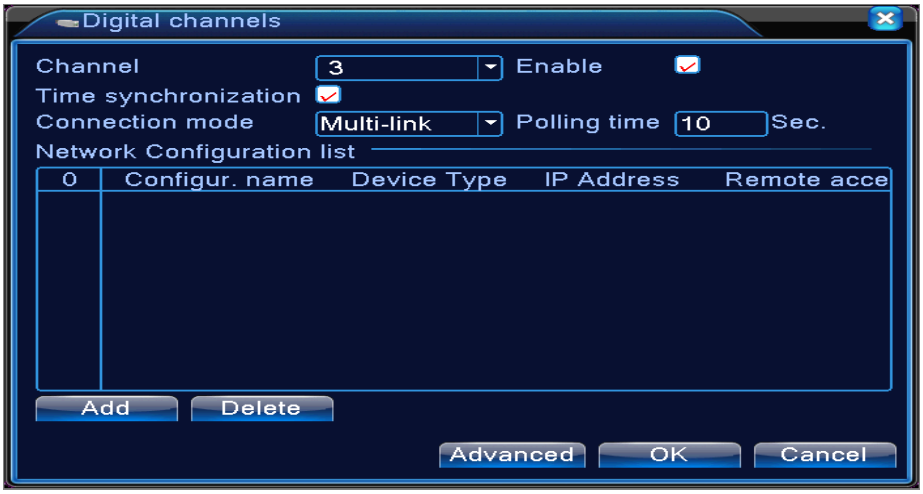


【Channel】select channel title;

【Enable】Open digital channel, tick enable, then can do related settings;

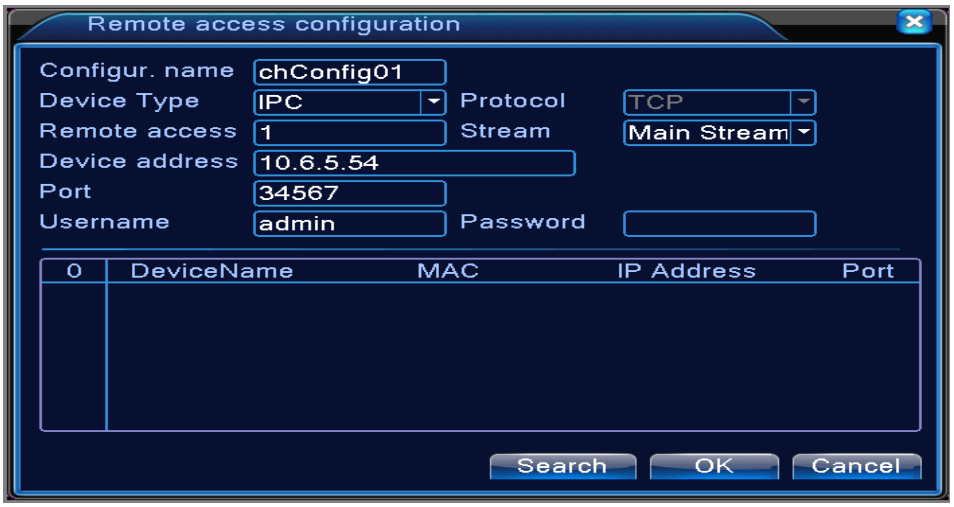
【Time Synchronization】Tick it means the time of this channel and device is the same.

【Connection Mode】can be singe connect or multi-ink, multi-link modes can connect to several devices, device will be tour displayed one by one, tour interval can be set, no less then 10s;



【Delete】If the user want to change device, select the existing device, click delete will be ok.

【Add】click add will come out below page to add new device：



【Configur Name】device is with default config title, user can revise it as you like；

【Device Type】3 types: IPC、DVR、HVR，user can choose as what you like, default is IPC；

【Protocol】Default is TCP

【Remote channel】User can input remote channel title from the device that you want to connect remotely；

【Stream】Default is main stream, do not support extra-stream at present；

【Device address】IP address of device.

【Port】Default is 34567；

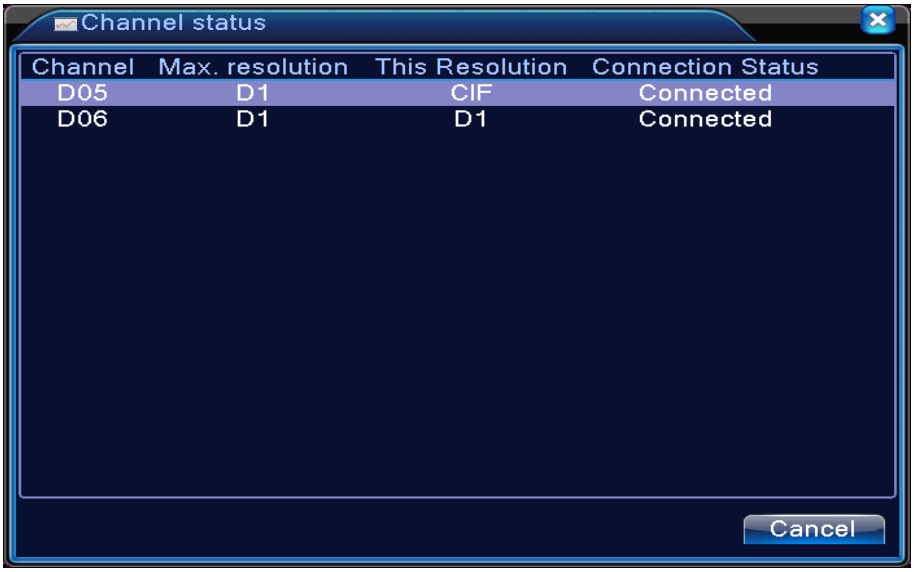
【User name】Default is admin

Remark: click 【search】will show all the devices that searched out, user can choose any of the device that you like.

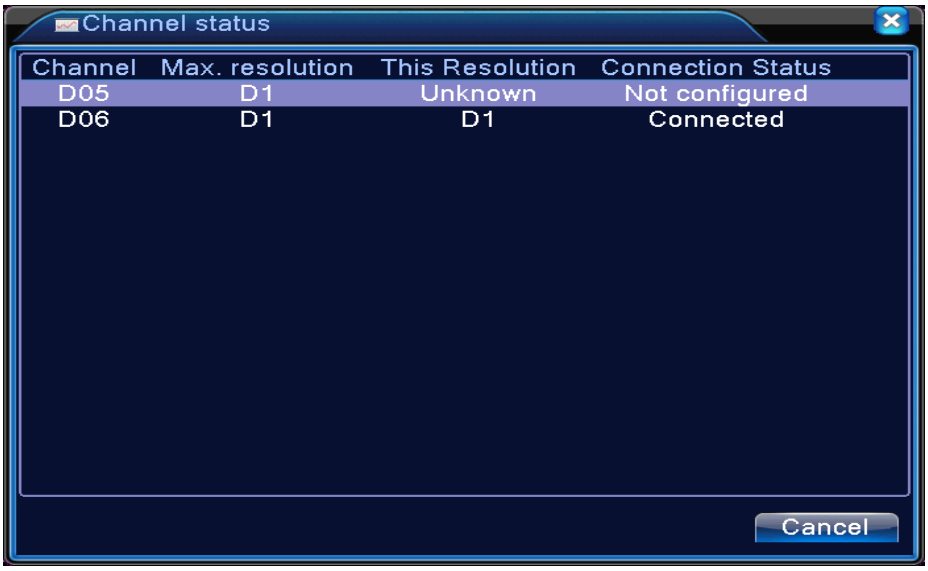
Channel Status：

Channel status is to show the status of all the digital channel, including Max Resolution, This Resolution, Connection Status.

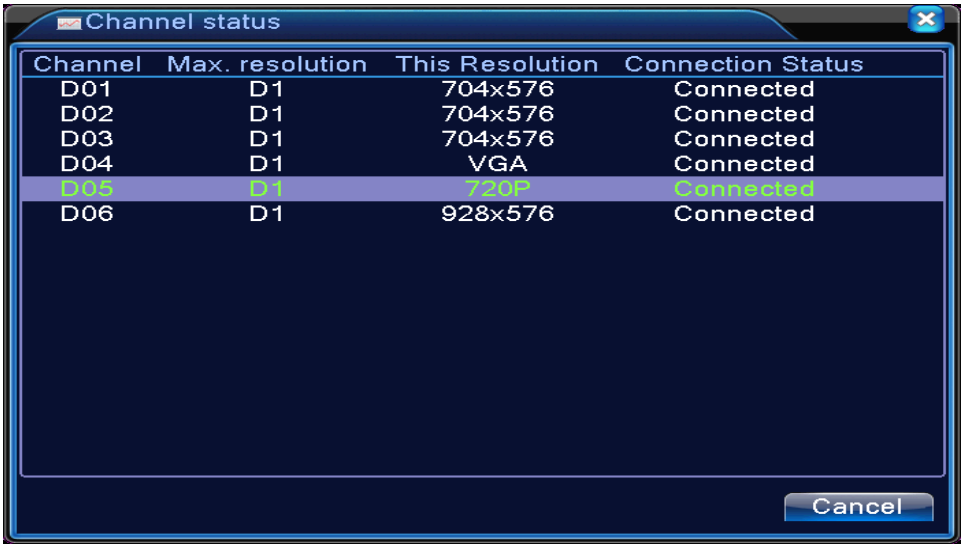
For example: The channel status for 4+2 mode is as below:



When a channel is added with device and it is online, you will see as below:



Channel status interface under full digital mode (One of the channel without device)

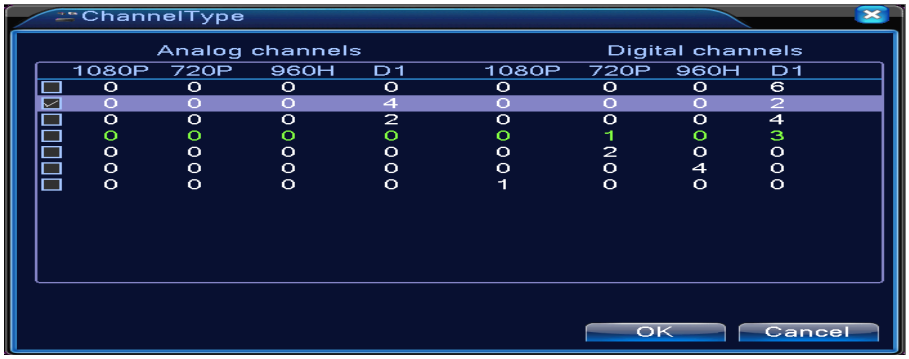


Remark: when This Resolution is over Max Resolution, when preview it, will show a red X, as

beow:

Under all digital channel mode, Max resolution of channel 3 is D1, if it was connected to a device with resolution over D1 (such as 960H), you will see below pic:

Channel Mode：



Remark: The system support mode of 0+6, 4+2, 2+4, 0+4, 0+2 as present, user can shift the mode as they like.

4.5 Advanced

4.5.1 HDD Manage

Configure and manage the hard disk. The menu displays current hard disk information: hard disk number, input port, type, status and overall capability. The operation include: setup the write-read disk, read-only disk, redundant disk, hard disk format, resume default. Choose the hard disk and click the right function button to execute.

Note：Read/Write Disk:The equipment can write or read data.

Read-only Disk:The equipment can read data but can not write data.

Redundant Disk:Double backup the video files in the write-read disk.

Picture4.32 HDD Manage

4.5.2 Account

Manage the user purview.

Note：1. The character length is 8 bytes at most for the following user and user team name. The blank ahead or behind the character string is invalid.The middle blank in the character string is valid. Legal characters include: letter, number, underline, subtraction sign, dot.

2. There is no limit in the user and user group. You can add or delete the user group according to user definition. The factory setup include: user\admin. You can set the team as you wish. The user can appoint the purview in the group.

3. The user management include: group/ user. The group and user name can not be the same. Each user only belongs to one group.

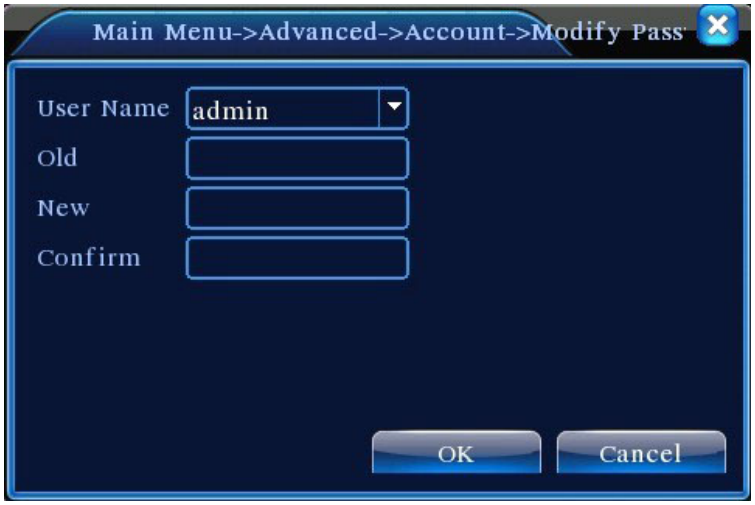
Picture 4.33 Account

【Modify User】Modify the existed user attribute.

【Modify Group】Modify the existed team attribute.

【Modify Password】Modify the user password. You can set 1-6 bit password. The blank ahead or behind the char string is invalid. The middle blank in the char string is valid.

Note：The user who possess the user control purview can modify his/her own or other users password

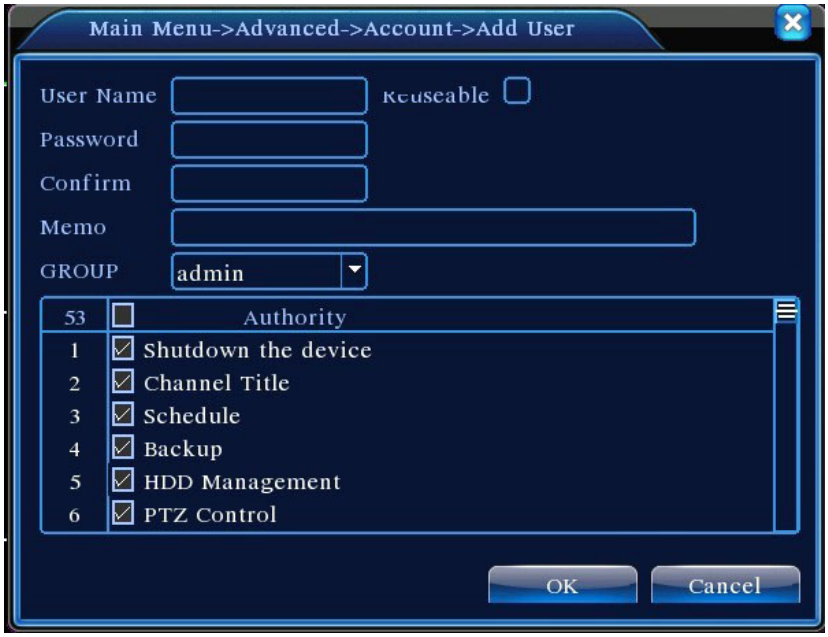


Picture 4.34 Modify Password

【Add user】Add a user in the team and set the user purview. Enter the menu interface and input the user name and password. Choose the team and choose whether cover using the user. Cover using means that the account can be used by multiple users at the same time.

Once choose the team the user purview is the subclass of the team.

We recommend that the common user's purview is lower than the advanced user.



Picture 4.35 add user

【Add Group】Add a user team and set the purview. There are 36 different purviews: shut down the equipment, real time surveillance, playback, recording setup, video file backup and so on.

Picture 4.36 Add Group

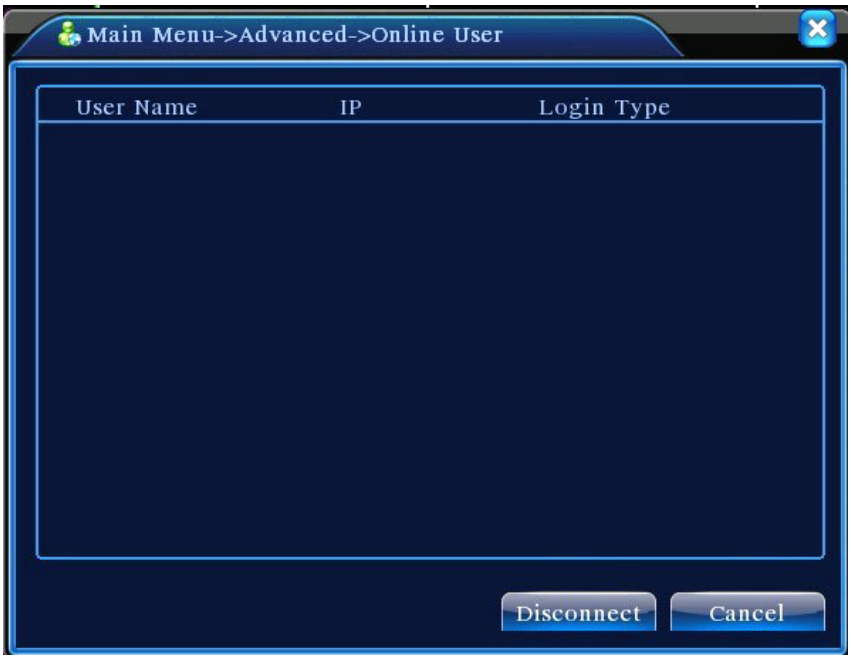
【Delete User】Delete the current user. Choose the user and click delete user button.

【Delete Group】Delete the current group. Choose the group and click delete group button.

Picture 4.37 Delete Group

4.5.3 Online User

Look up the network user information in the local DVR. You can choose the network user and cut the connection. Then the user is locked until next boot-strap.



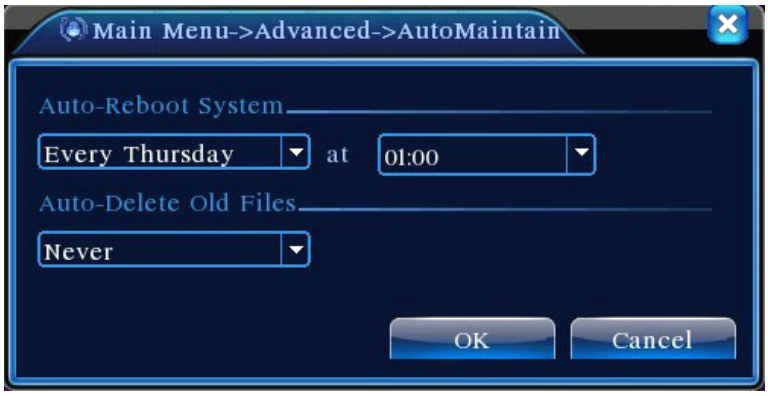
Picture 4.38 Online User

4.5.4 TV adjust

Refer to chapter 3.5.7 .

4.5.5 Auto Maintain

The user can set the auto reboot time and auto file deleting time limit.



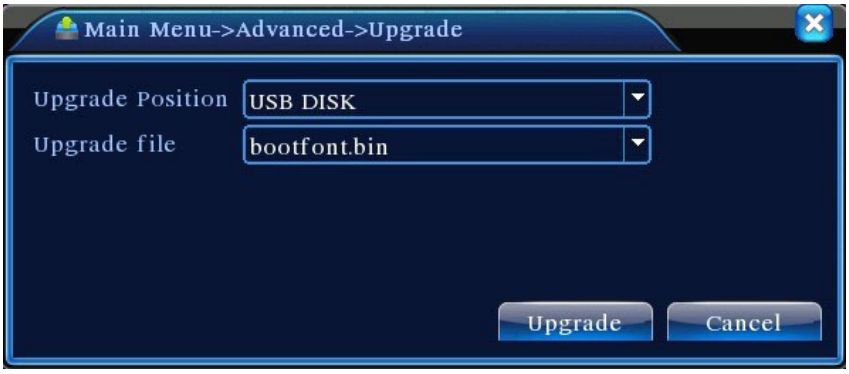
Picture 4.39 Auto maintain

4.5.6 Restore

The system restore to the default setup. You can choose the items according to the menu.

Picture 4.40 Restore

4.5.7 Upgrade



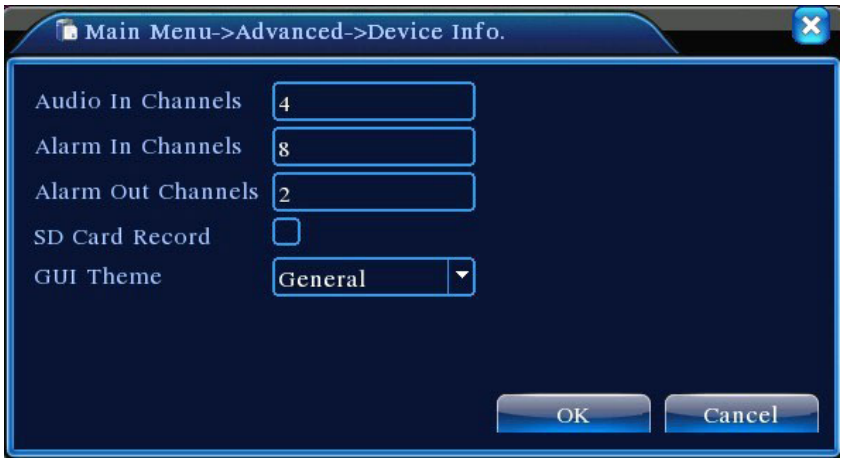
Picture 4.41 Upgrade

【Upgrade】**choose USB interface.**

【Upgrade file】**choose the file which needs upgraded.**

4.5.8 Device Info

Provide device interface info like audio in, alarm in/out to be conveniently used for user.



Picture 4.42 Device Info.

4.6 System Info

Shows with device information, including: HDD information, BPS Statistics, Log information, Version information.

4.6.1 HDD info

Display the hard disk state: hard disk type, overall capability, residual capability, the recording time and so on.

Main Menu->Info->HDD Info
SATA 1 2 3 4
O O O O
8-1 Type Capacity Left Capacity Status
All - 639.96 GB 549.80 GB -
1-1 Read/Write 58.29 GB 0.00 MB Normal
1-2 Read/Write 21.69 GB 0.00 MB Normal
2-1* Read/Write 79.99 GB 69.83 GB Normal
3-1 Read/Write 79.99 GB 79.99 GB Normal
4-1 Read/Write 79.99 GB 79.99 GB Normal
5-1 Read/Write 79.99 GB 79.99 GB Normal
6-1 Read/Write 79.99 GB 79.99 GB Normal
7-1 Read/Write 79.99 GB 79.99 GB Normal
8-1 Read/Write 79.99 GB 79.99 GB Normal
View recording times
Cancel

Picture 4.43 HDD Info

Clue:○ means that the hard disk is normal. X means that the hard disk is broken-down.- means that there is no hard disk. If the user need to change the damaged hard disk, you must shut down the DVR and take up all the damaged hard disks,then install a new one.

* behind serial number means the current working disk such as 1*. If the corresponding disk is damaged, the information will show "？".

4.6.2 BPS

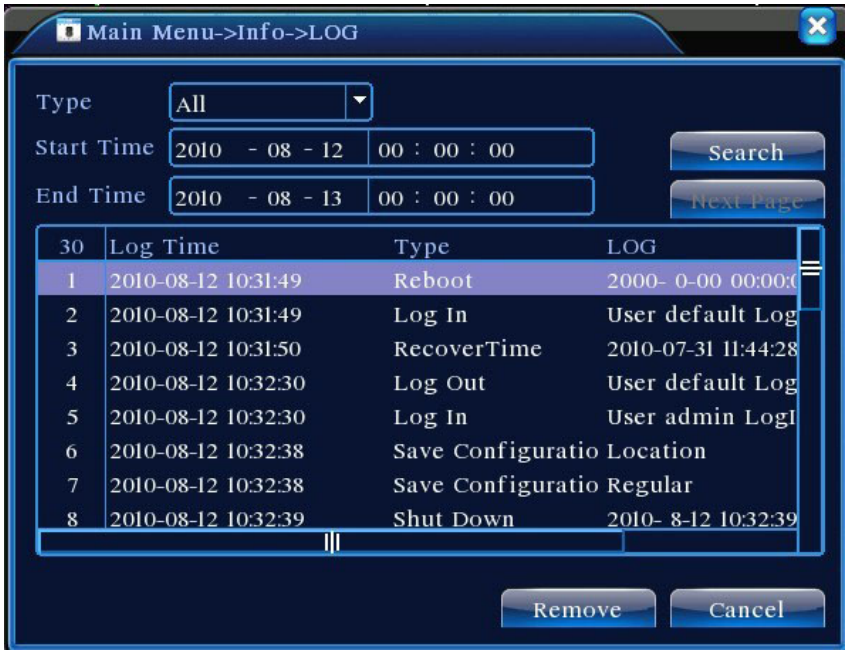
Display the code stream（Kb/S）and hard disk capability （MB/H）in real time. It displays as the wave sketch map.

Picture 4.44 BPS

4.6.3 LOG

Look up system log according to the set mode.

Log information include: system operation, configuration operation, data management, alarm affair, recording operation, user management, file management and so on. Set the time section to look up and click the look up button. The log information will display as a list. (one page is 128 items) Press **Page up** or **Page down** button to look up and press **delete** button to clear all the log information.



Picture4.45 LOG

4.6.4 Version

Display the basic information such as hardware information, software edition, issue data and so on.

Picture 4.46 Version

4.7 Shut down system

Refer to chapter 3.5.8.

5 FAQ and maintenance

5.1 FAQ

If the problems are not listed, please contact the local service or call the HQ service. We are willing to offer the service.

1、 The DVR can not boot up normally.

Possible reasons are as followed:

1 The power supply is not correct.

2 Switch power supply line is not in good connection.

3 Switch power supply is damaged.

4 The program updating is wrong.

5 The hard disk is damaged or the hard disk lines are broken.

6 The front panel is damaged.

7 The main board of the DVR is damaged.

2、 **The DVR reboots automatically or stops working after boot up a few minutes.**

Possible reasons are as followed:

1 The input voltage is not stable or too low.

2 The hard disk is damaged or the hard disk lines are broken.

3 The power of the switch power supply is low.

4 Frontal video signal is not stable.

5 Bad heat radiator or too much dust or bad running circumstance for the DVR.

6 The hardware of the DVR is damaged.

3、 System can not detect hard disk.

Possible reasons are as followed:

1 The hard disk power supply line is not connected.

2 The cables of the hard disk are damaged.

3 The hard disk is damaged.

4 The SATA port of main board is damaged.

4、 **There are no video outputs in single channel, multiple channels and all channels.**

Possible reasons are as followed:

1 The program is not matched. Please update the program.

2 The image brightness is all 0. Please restore the default setup.

3 There is no video input signal or the signal is too weak.

4 The channel protection or the screen protection is set.

5 The hardware of the DVR is damaged.

5、 Real-time image problems such as the image color or the brightness distortion.

Possible reasons are as followed:

1 When using the BNC output, the option between the N mode or PAL mode is wrong and the image becomes black and white.

2 The DVR is not matched the monitor impedance.

3 The video transmission distance is too far or the loss of the video transmission line is too large.

4 The color and brightness setting of the DVR is wrong.

6、 I can not find the video files in local playback mode.

Possible reasons are as followed:

1 The data line of the hard disk is damaged.

2 The hard disk is damaged.

3 Update the different program with the origin program files.

4 The video files to look up are covered.

5 The recording is not on.

7、 The local video is not clear.

Possible reasons are as followed:

1 The image quality is too bad.

2 The reading program is wrong. Reboot up the DVR.

3 The data line of the hard disk is damaged.

4 The hard disk is damaged.

5 The hardware of the DVR is damaged.

8、 There is no audio signal in the surveillance window.

Possible reasons are as followed:

1 It is not an active tone arm.

2 It is not an active sound box.

3 The audio lines are damaged.

4 The hardware of the DVR is damaged.

9、 **There is audio signal in the surveillance window but mo audio signal in the playback state.**

Possible reasons are as followed:

1 Setting issues: the audio option is not chosen.

2 The according channel is not connected with the video.

10、 The time is wrong.

Possible reasons are as followed:

1 Setting is wrong..

2 The battery is in bad connection or the voltage is too low.

3 The oscillation is damaged.

11、 The DVR can not control the PTZ.

Possible reasons are as followed:

1 There is something wrong with the frontal PTZ.

2 The setting, connection or the installation of the PTZ decoder is not correct.

3 The connections are not correct.

4 The PTZ setting of the DVR is not correct.

5 The protocols of the PTZ decoder and the DVR are not matched.

6 The address of the PTZ decoder and the DVR are not matched.

7 When multiple decoders are connected, the far port of the PTZ decoder line A(B) must connect a 120Ω resistance to reduce the reflection otherwise the PTZ control is not stable.

8 The distance is too far.

12、 The motion detect is not working,

Possible reasons are as followed:

1 The time range set is not correct.

2 The motion detect area set is not correct.

3 The sensitivity is too low.

4 Limited by some hardware edition.

13、 I can not login via web or CMS.

Possible reasons are as followed:

1 The system is windows 98 or win me. We recommend updating to windows 2000sp4 or higher Version or installing the software for low edition.

2 ActiveX is hold back.

3 The version is not exceeded dx8.1. Update the display card driver.

4 Network connection failure.

5 Network setting issues.

6 Invalid password or user name.

7 The CMS is not matched the DVR program version.

14、 The image is not clear or there is no image in network preview state or video file playback state.

Possible reasons are as followed:

1 Network is not stable.

2 The user machine is resource limited.

3 Choose the play-in-team mode in the network setup of DVR.

4 The region shelter or channel protection is set.

5 The user has no surveillance purview.

6 The real-time image of the hard disk recording machine itself is not clear.

15、 Network connection is not stable.

Possible reasons are as followed:

1 Network is not stable.

2 IP address is conflicted.

3 MAC address is conflicted.

4 The net card of the DVR is bad.

16、 There is something wrong with the USB backup or writing a CD.

Possible reasons are as followed:

1 The rewritable machine and the hard disk are shared the same data lines.

2 The data is too much. Please stop recording and backup.

3 The data exceeds the backup storage.

4 The backup equipment is not compatible.

5 The backup equipment is damaged.

17、 The keyboard can not control the DVR.

Possible reasons are as followed:

1 The serial port of the DVR is not set correctly.

2 The address is not correct.

3 When multiple transformers are connected, the power supply is not large enough. Please give each transformer individual power supply.

4 The distance is too far.

18、 Alarm can not be recessional.

Possible reasons are as followed:

1 The setting of the alarm is not correct.

2 The alarm output is turned on manually.

3 The input machine is damaged or the connections are not correct.

4 There are some problems for specific program edition, Please update the program.

19、 Alarm is not working.

Possible reasons are as followed:

1 The setting of the alarm is not correct.

2 The connection of the alarm is not correct.

3 The alarm input signal is not correct.

4 A alarm is connected with two loops synchronously.

20、 The remote controller is not working,

Possible reasons are as followed:

1 The remote control address is not correct.

2 The remote control distance is too far or the angle is too large.

3 The battery is used up.

4 The remote controller or the front panel of the recording machine is damaged.

21、 The storage time is not enough.

Possible reasons are as followed:

1 Front vidicon quality is bad. The lens is too dirty. The vidicon is in backlighting installation.

2 The hard disk capability is not enough.

3 The hard disk is damaged.

22、 The downloading files can not play.

Possible reasons are as followed:

1 There is no media player.

2 There is no DX8.1 software or higher edition.

3 There is no DivX503Bundle.exe file to play AVI video files.

4 The DivX503Bundle.exe and ffdshow-2004 1012 .exe files must be installed in the windows xp system.

23、 **I can not remember the advanced password or network code in the local menu operation.**

Please contact the local service or call the HQ service. We will offer the service according the machine type and the program edition.

24、 Can not see the preview picture the digital channel

Possible reasons are as followed:

1 Did not add device

2 The device of related channel was not enable

3 The device of related channel was not selected.

4 The selected device did not connect to video sources

5 The channel title of selected remote device is not exist.

6 Stream for remote channel was set by extra stream.

7 User name & password not matched

8 directly input with IP address or port No. incorrectly when adding device.

9. The resolution of added device is too large to display by the monitor.

25、 Click “search” why not search out any of the device.

Possible reasons are as followed:

1 There is no other device exist in the Local area network

2 The subnet mask setting incorrectly on Network settings.

26、 The snapshot at alarm function was enable, why not catch picture

Possible reasons are as followed:

1 HDD manage without partition for snapshot.

2 Partition for snapshot is 0

3 The snapshot function is not enable on record-> storage of related channel.

27、 The time shows on digital channel is not the same as local side:

Enable the time synchronous function of digital channel.

28、 Can not see preview picture of analog channel

Possible reasons are as followed:

1 The camera did not connect to video interface

2 The device did not connect to video source

3 Video source is broken.

29、Picture will be frozen when multi-connection and shift devices.

Picture come out from digital channel need few seconds, shift device means to show new picture, so it needs several seconds to buffer.

30、IE activeX can not download or install under Win 7 system

Possible reasons are as followed:

1 Install IE activeX, don’t install as administrator, incase not perfect install or invalid install, should click with right button choose install as administrator.

2 It was blocked when auto-download activeX, can do below operation on PC: “Start”-> “Run”-> input ‘msconfig’, then choose “Tool”-> revise UAC settings -> set with “Never inform”.

3 ActiveX was blocked by anti-virus software, please shutdown anti-virus software when installing, after successfully installed, set activeX as reliable software.

31、 CMS install failed under Win7 system, or can not open after installation.

Possible reasons are as followed:

1 Don’t install as administrator, incase not perfect install or invalid install.

5.2 Maintenance

1 Please brush printed circuit boards, connectors, fans, machine box and so on regularly.

2 Please keep the grounding well done to prevent the video or audio signal interfered and the

DVR from static or inductive electricity.

3 Do not pull out the video signal line or RS-232 port or RS-485 port with the power on.

4 Do not use the TV in the local video output port(VOUT) of DVR. It will damage the video output circuit easily.

5 Do not turn off the switch directly. Please use the turn-off function in the menu or press the turn-off button in the panel (3 seconds or longer) to protect the hard disk.

6 Please keep the DVR away from heat resource.

7 Please keep the DVR ventilated for better heat radiator.

Please check the system and maintain regularly.

Appendix 1.Remote controller operation

Serial number	Name	Function
1	Multi-window button	Same function as Multi-window button in the front panel
2	Numeric button	Code input/number input/channel switch
3	【Esc】	Same function as【Esc】button in the front panel
4	Direction button	Same function as direction button in the front panel
5	Record control	Control the record
6	Record mode	Same function as “Record mode”
7	ADD	Input the number of DVR to control it
8	FN	Assistant function

Appendix 2.Mouse operation

***Take right hand as an example**

The mouse in USB connection is supported.

Operation	Function
Double left click	Double click one item in the file list to playback the video Double click the playback video to zoom in or out the screen
	Double click the channel to make it full screen display double click again to resume the multi-window display
Left click	Choose the according function in the menu
Right click	Pop desktop shortcut menu in preview state
	Current shortcut menu in the menu
Press middle button	Add or subtract number in the number setting
	Switch the items in the combo box
	Page up or down in the list
Move mouse	Choose the widget or move the item in the widget
Drag mouse	Set the motion detect area
	Set the cover area

Appendix 3.Hard disk capability calculation

Make sure the hard disk installed to the DVR for the first time. Pay attention to the IDE hard disk lines connection.

1、 Hard disk capability

There is no limit for recording machine. We recommend 120G~250G size to keep better stability.

2、 Overall capability option

The hard disk capability formula is:

Overall capability（M）=channel number*time（hour）*capability in an hour（M/hour）

The recording time formula is:

$$\text{Recording time（hour）} = \frac{\text{overall capability（M）}}{\text{Capability in an hour（M/hour）*channel number}}$$

The DVR introduces the H.264 compression technology. Its dynamic range is very large so the hard disk capability calculation is based on the estimation values of each channel creating files in an hour.

Example:

For one piece 500G HDD,real time CIF for recording,it will keep recording for about 25 days.HDD spaces per channel is 200M/H,if 4channels real time CIF at 24hours recording uninterrupted,it can last:500G/(200M/H*24H*4ch)=26 days

Feature

	Model	**HVR5006D-E**
System	Main Processor	High performance embedded microprocessor
	Operating System	Embedded LINUX
	System Resources	Pentaplex function:live,recording,playback,backup & remote access
Interface	User GUI	GUI,on-screen menu tips
	Display Screen	1/4/6 screens
Video	Video Standard	PAL625 line,50 f/s; NTSC525 line,60 f/s
	Video Compression	H.264(Main Profile),JPEG snapshot

	Video Preview	Monitor:D1, VGA:High Definition, HDMI(optional)
	Playback	1080P/720P/960H/D1/HD1/CIF/QCIF
	Hybrid Input	Analog + digital: 4*D1+2*D1 2*D1+4*D1 Only Digital: 6*D1 1*720P+ 3*D1 2*720P 4*960H 1*1080P
	Motion Detect	Zones:64(8*8)detection zones,Sensitivity:1-6(6 is highest) Trigger recording,PTZ movement,tour,alarm,e-mail,snapshot & FTP
Audio	Audio Compression	G711A
	Bidirectional Talk	Support
Record & Playback	Recording Mode	Manual>Alarm>Video Detection>Continuous
	Local Playback	6ch
	Search Mode	Time/Date,Alarm,Motion Detection & exact search(accourate to second)
Storage & Playback	Space Occupation	Video CIF:4 - 5G/day/channel, D1:16 - 20G/day/channel 960H: 9 - 42G/day/channel, 720P: 10G~42G/day/channel Audio: 691.2M/day/channel
	Record Storage	Local HDD/SD card/Network
	Back Mode	Network download/Flash stick/USB movable HDD/DVR-RW/SD card
Interface	Video Input	4ch BNC
	Video Output	2ch BNC, 1ch VGA,1ch HDMI(optional)
	Audio Input	4ch RCA
	Audio Output	1ch RCA
	Alarm Input	8ch
	Alarm Output	1ch
	Network	RJ45 10M/100M
	Control Port	1 x RS485, 1 x RS232; support 18kinds of PTZ protocols
	USB	2 x USB2.0
	HDD	2 x SATA HDD,Max 2 x 2T
	Wireless	3G & WIFI
Others	Power Supply	12V/4A
	Dimension	310(L)* 285(W)* 45(H)mm